APPLICATION FOR PERMIT FOR INDUSTRIAL SEWER USE BWP IW 38

Facility Discharging More Than 50,000 gpd to IPP POTW

January 2008

Prepared For:



Rohm & Haas Electronic Materials, LLC 455 Forest Street Marlborough, MA 01752



Prepared By:
ENVIROBUSINESS, INC.
21 B Street
Burlington, MA 01803
Phone (800) 786-2346

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21 B Street Burlington, MA 01803 Tel: (781) 273-2500

Fax: (781) 273-3311

January 11, 2008

Mr. Giles Steele-Perkins

Massachusetts Department of Environmental Protection
Central Regional Office
Industrial Wastewater Management Program
627 Main Street
Worcester, Massachusetts 01608

Re: Application for Permit for Industrial Sewer Use (BWP IW 38)
Rohm & Haas Electronic Materials, LLC

As required by 314 CMR 7.00, please find attached two paper copies and one disk with an electronic copy of a completed Application for Permit for Industrial Sewer Use (BWP IW 38) for the industrial wastewater discharge from the Rohm & Hass Electronic Materials, LLC (RHEM) facility in Marlborough, Massachusetts. RHEM discharges more than 50,000 gpd to the Marlborough Westerly Wastewater Treatment Plant. The Marlborough Treatment Plant is a POTW with an approved Industrial Pretreatment Program (IPP).

EBI Consulting has prepared this Certification on behalf of RHEM. Please contact me with any questions or concerns regarding this Application.

Sincerely yours, *EBI Consulting, by:*

Paul G. Richard, P.E.

Paul & Richard

Senior Program Director
Direct Tel: (617) 715-1825

prichard@EBIConsulting.com

attachments: Application for Permit for Industrial Sewer Use (two paper copies and one disk)

copy: Sarita Croce - RHEM

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ATTACHMENT B	POTW Sewer Use Permits
ATTACHMENT C	Site Map and DEP Priority Resource Map

Engineering Plans

Description of Industrial Wastewater Pretreatment Systems ATTACHMENT E

Enter your transmittal number

W201133
Transmittal Number

Your unique Transmittal Number can be accessed online: http://mass.gov/dep/service/online/trasmfrm.shtml or call MassDEP's InfoLine at 617-338-2255 or 800-462-0444 (from 508, 781, and 978 area codes).

Massachusetts Department of Environmental Protection

1. Please type or
print. A separate
Transmittal Form
must be completed
for each permit
application.

- 2. Make your check payable to the Commonwealth of Massachusetts and mail it with a copy of this form to: DEP, P.O. Box 4062, Boston, MA 02211.
- **3.** Three copies of this form will be needed.

Copy 1 - the original must accompany your permit application. Copy 2 must accompany your fee payment. Copy 3 should be retained for your records

4. Both fee-paying and exempt applicants must mail a copy of this transmittal form to:

> MassDEP P.O. Box 4062 Boston, MA 02211

* Note: For BWSC Permits, enter the LSP.

DEP Use Only

Permit No:

Rec'd Date:

Reviewer:

A. Permit Information				
BWP IW 38		Permit for Indu	strial Sewer User	
Permit Code: 7 or 8 character code from per	mit instructions	2. Name of Permit		
Industrial Sewer User in IPP POTW	discharging mor	e than 50,000 C	GPD .	
3. Type of Project or Activity				
3. Applicant Information – Firm	or Individua	ıl		
Rohm and Haas Electronic Material	s, LLC			
1. Name of Firm - Or, if party needing this ap		al enter name below	r.	
2. Last Name of Individual	3. First	Name of Individual		4. MI
455 Forest Street				
5. Street Address				
Marlborough	MA	01752	(508) 229-7250	
6. City/Town	7. State	8. Zip Code	9. Telephone #	10. Ext. #
Sarita Croce		SCroce@rohm	haas.com	
11. Contact Person		12. e-mail address		
C. Facility, Site or Individual Re	auirina Appi	oval		
• •		0.00.		
Rohm and Haas Electronic Material	s, LLC			
1. Name of Facility, Site Or Individual				
455 Forest Street				
2. Street Address			()	
Marlborough	MA	01752	(508) 229-7250	_
3. City/Town	4. State	5. Zip Code	6. Telephone #	7. Ext. #
130595	04-3252			
8. DEP Facility Number (if Known)	9. Federa	I I.D. Number (if Kn	own) 10. BWSC Tracking	ng # (if Know
D. Application Prepared by (if o	different from	Section B)*		
EnviroBusiness, Inc. (d/b/a EBI Cor	sulting)			
Name of Firm Or Individual	<u> </u>			
21 B Street				
2. Address				
Burlington	MA	01803	(781) 273-2500	
3. City/Town	4. State	5. Zip Code	6. Telephone #	7. Ext. #
Paul Richard		·	·	
8. Contact Person		9. LSP Number (B)	WSC Permits only)	
E. Permit - Project Coordination	<u> </u>			
1. S. mit 1. Tojout Gooramation	•			
. Is this project subject to MEPA review?	🗌 yes 🛛 no			
If yes, enter the project's EOEA file num	ber - assigned wh	en an		
Environmental Notification Form is subr	nitted to the MEPA	unit:		
		EOEA	File Number	
F. Amount Due				
Special Provisions:				
. Fee Exempt (city, town or municipal hous	ing authority)(state a	gency if fee is \$100	or less).	
		J ., , , +	· ,	
There are no fee exemptions for BWSC perm	• • • • • • • • • • • • • • • • • • • •	plicant status.		
	nits, regardless of ap according to 310 CM	R 4.04(3)(c).		

tr-formw BWP IW 38 • rev. 1/07 Page 1 of 1

Dollar Amount

Date

\$1,605

☐ Homeowner (according to 310 CMR 4.02).

Check Number

2. INTRODUCTION

As required by 314 CMR 7.00 (Sewer System Extension And Connection Permit Program) for facilities that discharge more than 50,000 gallons per day (gpd) to a Publicly Owned Treatment Works (POTW) with an Industrial Pretreatment Program (IPP), Rohm and Haas Electronic Materials, LLC (RHEM) is hereby submitting an application for a Permit for Industrial Sewer Use, BWP IW 38 (the Application), to the Massachusetts Department of Environmental Protection, Bureau of Waste Prevention – Industrial Wastewater.

RHEM operates a chemical blend plant at 455 Forest Street in Marlborough Massachusetts. A portion of a USGS topographic map (Marlborough Quadrangle) is presented in Attachment C, which depicts the location of the facility. The facility was constructed on a "greenfield" site (former apple orchard) in 1981 at a location known as Stirrup Hill in northwest Marlborough.

Operations at the RHEM facility are described by SIC Code 2899 (Chemicals and Chemical Preparations, Not Elsewhere Cclassified). The RHEM Marlborough facility prepares specialty chemicals for the electronics and related industries, including photo resists (organic manufacturing), developers, etchers, cleaners, plating solutions (inorganic manufacturing), and catalysts used in printed wire board manufacturing (dry chemical manufacturing). For research and development (R&D) and quality control, the facility operates pilot size clean rooms to process semiconductor wafers and plating lines to process printed wire boards. The facility also operates a number of quality control and analytical laboratories to support manufacturing and R&D operations.

Based upon correspondence with the City of Marlborough in May 1996, it has been determined that the facility is not a Categorical Industrial User (CIU) subject to the federal categorical standards of 40 CFR Chapter I, Subchapter N. Specifically, while the company blends a number of different organic and inorganic commodity chemicals, it does not synthesize, chemical react or otherwise manufacture any chemicals that would be covered by a categorical standard.

The vast majority of the wastewater generated by the processes described above is treated on-site in a Class IV Industrial Wastewater Pretreatment System (Main Pretreatment Facility); a much smaller portion is treated in a Class II Industrial Wastewater Pretreatment System (ATC Pretreatment System). The effluent from both systems is discharged to the City of Marlborough Westerly Waste Treatment Works under permit SIU 4817950 (Main Pretreatment Facility – Outfall S01) and NSIU 4817950-1 (ATC Pretreatment – Outfall NS02).

The facility's two IWPS's are currently treating a combined total flow of approximately 30,000 - 45,000 gallon per day (gpd), but the Main Pretreatment Facility is designed to accommodate flows as large as 90,000 gpd at maximum projected production levels.

The IWPS is further detailed in the BWP IW 38 Application Form found in Section 2.0, and Attachment E, Description of IWPS. Wastewater sampling results are presented in Attachment A; existing POTW sewer use permits are found in Attachment B; a DEP Priority Resource Map is found in Attachment C; and IWPS Engineering Plans and Process Flow Diagrams have been included in Attachment D.

- Main Pretreatment Facility
- ATC Pretreatment System



Bureau of Waste Prevention - Industrial Wastewater

BWP IW 38 & BWP IW 39

Permit for Industrial Sewer User

W201133
Transmittal Number
130595

Facility ID# (if known)

DEP Use Only

Important Instructions for Completing This Form

Date Received

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return

kev.

The questions on this form apply to existing and new facilities discharging industrial wastewater to sewers. If you are completing this form for an existing facility, answer the questions as they apply to its current status. If you are completing this form for a new facility, your answers will reflect your commitment to comply with the requirements as set forth in each question.

Existing facilities are defined as facilities in existence as of July 12, 2007. New facilities are defined as facilities constructed after July 12, 2007.

Answer all questions, except those that you are directed to skip. Please DO NOT answer questions that you are directed to skip

Permit Category (Select One)

- ☐ BWP IW 39: Industrial Sewer User in Non-IPP POTW discharging more than 25,000 GPD

A. Facility Information

Rohm and Haas Electronic Mate	rials, LLC	
1a. Facility Name		
455 Forest Street		
1b. Facility Address 1		
1c. Facility Address 2		
Marlborough	MA	01752
1d. City	1e. State	1f. Zip Code
(508) 229-7250	(508) 460-0522	
1g. Phone Number	1h. Fax Number	
04-3252691		
1i. Federal Employer Tax Identification N	umber (FEIN or TIN)	
Mailing Address: ⊠ Check I	nere if same as Facility Address and sk	tip to Contact Information.
Mailing Address:	nere if same as Facility Address and sk	kip to Contact Information.
	nere if same as Facility Address and sk	rip to Contact Information.
2a. Mailing Address: Street or P.O. Box	nere if same as Facility Address and sk	zip to Contact Information.
2a. Mailing Address: Street or P.O. Box 2b. Mailing Address 2 2c. City		
2a. Mailing Address: Street or P.O. Box 2b. Mailing Address 2 2c. City		
2a. Mailing Address: Street or P.O. Box 2b. Mailing Address 2 2c. City Contact Information:		

3d. Extension

3b. Contact Person Title (508) 229-7250
3c. Phone Number

3e. Email Address

SCroce@rohmhaas.com



BWP IW 38 & BWP IW 39

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130595
Facility ID# (if known)

B. Industrial Wastewater Information

Project Description	on (Check All Ti	hat Apply)				
☐ 1a. New Cons	truction		1b. Permit Renewal			
☐ 1c. Increasing	Flow From Exist	ing Connection [1d. New or Modified Industrial Wastewater Pretreatment System (IWPS)			
			Ibmitted to MADEP in D			
best describe	e the facility pro	ducing the discharge in	ard Industrial Classification terms of the principal proper Appendix B in the Inst	oducts or services		
2899		(Chemicals and Chemical	Preparations, NEC		
2a. SIC Code			Description			
2b. SIC Code			Description			
2c. SIC Code			Description			
2d. SIC Code			Description			
facility going	to the Publicly	Owned Treatment Worl 2006 through 10/2007) NS02				
	3a. Connect	tion # 3b. Connection	n # 3c. Connection #	14,900		
SANITARY	GPD	GPD	GPD	GPD		
INDUSTRIAL	45,100			45,100		
INDOOTRIAL	GPD	GPD	GPD	GPD		
TOTAL	60,000 GPD	<u>258</u> GPD	GPD	<u>60,353</u> GPD		
4. Are you in co ⊠ Yes	mpliance with t	*If No, You Must Comply	orical Commission requir With Massachusetts Histor You Can Submit This Applic	ical Commission		
5. Are you in co	5. Are you in compliance with Massachusetts Environmental Policy Act (MEPA) requirements?					
⊠ Yes						



BWP IW 38 & BWP IW 39

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B. Industrial Wastewater Information (continued)

. industriai wastewat	er informatio	(continued)			
6. Check all pollutants that are present in your industrial wastewater before pretreatment, or if not treated, before discharge:					
If Metals, Asbestos, Cyanide, (mg/L):	or Phenols are pre	sent, provide concentrations	in milligrams per liter		
 Antimony (total) (Sb) Arsenic (total) (As) 	See Attachment A	9. Nickel (total) (Ni) 10. Selenium (total) (Se)	mg/L		
3. Beryllium (total) (Be)	mg/L	11. Silver (total) (Ag)	mg/L		
4. Cadmium (total) (Cd)	mg/L mg/L	12. Thallium (total) (TI)	mg/L mg/L		
5. Chromium (hexavalent)	mg/L	13. Zinc (total) (Zn)	mg/L		
6. Chrome (total) (Cr)	mg/L	14. Asbestos	mg/L		
7. Copper (total) (Cu)	mg/L	15. Cyanide (total) (CN)	mg/L		
8. Lead (total) (Pb)	mg/L	_ 16. Phenols (total)	mg/L		
If Toxic Pollutants are present, provide the total Toxic Pollutants concentration in micrograms per liter (ug/L):					
See Toxic Pollutant Forms and Attachment A 6b1. Total Toxic Pollutants Concentration (ug/L) NOTE: Use the Toxic Pollutants Form to list individual toxic chemicals and their concentrations.					
⊠ 6c. Total Petroleum Hydrocarbons (TPH) > 15 mg/L					
⊠ 6d. pH <5 and >10 Standard Units (S.U)					
⊠ 6e. Other*					
*If Other Pollutants are present, describe them:					
BOD, TSS, nitrogen and phosphorous - See wastewater sampling results in Attachment A					



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R	Industrial	Wastewater	Information	(continued)
D.	muustriai	wastewater	iniormation	(continued)

7. Is Mercury (Hg) predischarge?	esent in your industrial was	stewater before pretreatment, or if not treated, before
☐Yes	⊠ No*	*If No, skip to Question 8.
7a. If Yes, have you id eliminate the mercury	•	ury sources and taken all reasonable steps to
☐ Yes*	□ No	*If Yes, skip to Question 8.
7b. If No, explain why	·.	
NOTE: As of May 1, 2 Mercury.	2009, all facilities must med	et a discharge limit of 1 part per billion (ppb) for
	of the Publicly Owned Trea pendix C in the Instruction	atment Works (POTW) that receives your s.)
Marlborough Westerly Name of POTW	y Waste Treatment Works	_
		harge permit or a current written approval issued by uctions.) See Attachment B for permits.
⊠ Yes	□ No*	*If No, you must obtain either a permit or, if a permit is not required, a written approval from your local POTW to discharge BEFORE you can submit this application.
If you have a permit, p	provide the following inforn	nation, then skip to Question 10.
SIU 4817950 (S01) & NSIU4817950-1 (NS02) 9a. Permit Number		12/03/2011 (S01) and 02/09/2008 (NS02) 9b. Permit Expiration Date
If you have a written a	approval, provide the follow	ving information:
9c. Date of Approval Letter		9d. Name of Person Who Signed the Letter
10. Are your POTW a	nd local Sewer Authority th	ne same entity? (See Section 17B in the Instructions.)
⊠ Yes*	□No	*If Yes, skip to Question 12.



BWP IW 38 & BWP IW 39

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B. Industrial Wastewater Information (continued)

- :		(sommasa)
		nection discharge permit or a current written approval issued by tion 17B in the Instructions.)
☐ Yes	□ No*	If No, you must obtain either a permit or written approval from your local Sewer Authority to discharge BEFORE you can submit this application.
If you have a p	permit, provide the follo	wing information, then skip to Question 12.
11a. Permit Numb	per	11b. Permit Expiration Date
If you have a v	written approval, provide	e the following information:
11c. Date of Appre	oval Letter	11d. Name of Person Who Signed the Letter
	ility currently classified (See Appendix D in the	as a Categorical Industrial User (CIU) pursuant to Federal Instructions.)
□Yes	⊠ No*	*If No, skip to Section C.
12a. List all the	e Categorical Pretreatm	nent Standards applicable to your facility.
12a1. Part Number)r	Point Source Category
12a2. Part Number		Point Source Category
12a3. Part Numbe		Point Source Category
12a4. Part Numbe	er	Point Source Category
C. Industrial	Wastewater Pr	etreatment System
 Do you have wastewater? 	e an on-site industrial w	vastewater pretreatment system (IWPS) to treat your industrial
⊠ Yes	□ No*	*If No, skip to Section D.
1a. How many	/ IWPSs do you have?	
2 Number		NOTE: If you have more than one IWPS, please use an Additional IWPS Form for each additional IWPS.
	unique identifier (i.e. na ment System – Outfall (·



Bureau of Waste Prevention – Industrial Wastewater

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C. Industrial Wastewater Pretreatment System (continued)

1c. What is the Total Design Capacity of this IWPS? 90,000 Gallons Per Day				
1d. What is the Avera	age Daily Flow of this IPWS	S? (Estimate if this is a new facility.)		
32,900 (12 month pe	riod from 11/2006-10/2007	for outfall C01)		
1e. What is the Maxir	mum Daily Flow of this IWF	PS? (Estimate if this is a new facility.)		
45,100 (12 month pe Gallons Per Day	riod from 11/2006-10/2007	for outfall C01)		
		eet all local discharge standards and the applicable 0 CFR Chapter I, Subchapter N?		
⊠ Yes	□ No*	*If No, you must take immediate steps to address the non-compliance BEFORE you can submit this application.		
3. Does this IWPS tre as defined in 314 CM		astewater or hazardous industrial wastewater sludge		
⊠ Yes	□ No*	*If No, skip to Question 12.		
3a. Are you treating oproducts?	concentrated chemical bath	ns, e.g. spent chemical baths, or off-specification		
⊠ Yes	□ No*	*If No, skip to Question 4.		
3b. If Yes, describe the	3b. If Yes, describe the concentrated chemical baths you are treating.			
The waste chemistry ass	sociated with circuit board tech	nology.		
4. Does your IWPS n process" as defined i		reatment which is an integral part of the manufacturing		
⊠ Yes*	□ No	*If Yes, skip to Question 7.		
5.Do you store hazardous industrial wastewater or hazardous industrial wastewater sludge that is generated in your IWPS or in your production processes, in tanks or containers?				
Note: If you use in-ground tanks for storage of hazardous industrial wastewater or sludge and your IWPS is located in a Drinking Water Zone (see Section 17C of the Instructions; reference language in 310 CMR 30.605), you are not eligible to apply for a BWP IW 38 or BWP IW 39 permit. You must use form BWP IW 40 instead.				
☐ Yes	□ No*	*If No, skip to Question 7.		



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C. Industrial Wastewater Pretreatment System (continued)

	nce with the requirements 7C in the Instructions)	for tanks and containers in 310 CMR 30.342 and
☐ Yes	□ No*	*If No, you must take immediate steps to address the non-compliance BEFORE you can submit this application.
7. Do you have a U.S identification number		n Agency (EPA) hazardous waste generator
⊠ Yes	□ No*	*If No, skip to Question 7b.
7a. What is your EPA	A identification number?	
MAD 000844498 EPA ID #		Skip to Question 8.
7b. Explain why you	do not have an EPA identif	ication number.
8. Do you have a visi	ble sign in place that warns	s against unauthorized entry into the IWPS area?
⊠ Yes*	□ No	*If Yes, skip to Question 9.
8a. Explain why you	do not have a visible sign i	n place.
9.Do you have the re	quired spill containment fo	r the IWPS? (See Section 17C in the Instructions.)
⊠ Yes*	□ No	*If Yes, skip to Question 10.
9a. Explain why you	do not have the required sp	pill containment.
10. Is your IWPS local Instructions.)	ated on land subject to floo	ding from a 100-year storm? (See Section 17C in the
☐ Yes	⊠ No* (See Attachment C	*) *If No, skip to Question 12.



Bureau of Waste Prevention – Industrial Wastewater

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C. Industrial Wastewater Pretreatment System (continued)

11. Are you in comp 17C in the Instruction		od-proofing provisions in 310 CMR 30.701(2)? (See Section
☐ Yes	□ No*	*If Yes, skip to Question 12.
11a. Explain why yo	ou are not in compl	liance with the flood-proofing provisions in 310 CMR 30.701(2).
12. What type of IW	'PS do you have? ((Check all that apply.)
☐ Fully Automated	Industrial Wastewa	ater Pretreatment System (FAIWPS)
□ Continuous Discl □	harge IWPS	☐ Batch IWPS
13. Is the IWPS exe	empt from classifica	ation? (See Section 17C in the Instructions.)
☐ Yes*	⊠ No	*If Yes, skip to Question 14.
13a. What is the cla Treatment Facilities		WPS? (See 257 CMR 2.13: Classification of Wastewater
☐ Class 1I	☐ Clas	ss 2I
⊠ Class 4I	☐ Clas	ss 5 or 6C
☐ Class 2M	☐ Clas	ss 3M
13b. How was the IV	NPS' classification	n determined?
☐ In accordance wi	ith the requirement	ts in 314 CMR 7.05(2)(g) 4. c. or d.
	Certification of Ope	erators of Wastewater Treatment Facilities
□ Both		
14. Is the IWPS state 17C in the Instruction		with the requirements of 314 CMR 7.05(2)(g) 5? (See Section
⊠ Yes*	□ No *If Yes, skip to Question 15.	



Bureau of Waste Prevention – Industrial Wastewater

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rmit for indi	ustriai Sewer User	Facility ID# (if known)
Industrial	Wastewater Pre	treatment System (continued)
14a. Explain w	why the IWPS is not staffe	ed in accordance with 314 CMR 7.05(2)(g) 5.
	this application a reques	under Permit Category BWP IW 38 or BWP IW 39 for this t for modification of this IWPS that currently has a BWP IW
⊠ Yes*	□ No	*If Yes, you need to submit as an attachment the proce flow diagram and description of the principal treatment processes for your IWPS. Otherwise, skip to Question
16. How many	attachments are include	ed with this application in response to Question 15?
	ments D and E	
Number of Attach	ments	
		VPS been designed and constructed in compliance with the set forth in 314 CMR 7.05(2)(g)3?
⊠ Yes	□ No*	*If No, skip to Question 17b.
17a. What is the engineering pl		tered Professional Engineer (MAPE) signature date on the
January 1, 200		Skip to Question 18.
Date		
		on and IWPS have not been designed and constructed in a uction standards as set forth in 314 CMR 7.05(2)(g)3.
18. Provide the	e following information at	pout the Massachusetts Registered Professional Engineer
		signed your engineering plans:
Christopher A.	. Walton	(781) 273-2500
18a. Name		18b. Phone Number
39510		Civil

18c. Mass. P.E. License Number

18d. Mass. P.E. Specialty



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C. Industrial Wastewater Pretreatment System (co	ontinued)
--	-----------

		and maintenance manual that complies with the procedures and 2)(g)6.?
⊠ Yes*	□ No	*If Yes, skip to Question 20.
19a. Explain w	hy you do not have the	required IWPS operation and maintenance manual.
20. Are you ke	eping your IWPS opera	ation and maintenance manual current?
⊠ Yes	□ No	
21. Are you im	plementing your IWPS	operation and maintenance manual?
⊠ Yes	□ No	
Monitoring	g, Reporting & l	Recordkeeping
		ctive sewer discharge permit(s), IWPS plan(s), and current) (as applicable) on-site at all times?
⊠ Yes*	☐ No	* If Yes, skip to Question 2.
1a. Explain wh	y you are not keeping t	hese records on-site at all times.
records, opera- requiring imple	tion and maintenance rementation of the safety	ecords including your wastewater monitoring and analyses ecords and logs, bills of lading, summary reports of all incidents plan, and hazardous waste manifests (as applicable) on-site for
⊠ Yes*	□No	* If Yes, skip to Question 3.
2a. Explain wh	y you are not keeping t	hese records on-site for at least three years.
	other requirem ☐ Yes* 19a. Explain w 20. Are you ke ☐ Yes 21. Are you im ☐ Yes Monitorin 1. Are you kee operation and ☐ Yes* 1a. Explain wh 2. Are you kee records, opera requiring imple at least three y ☐ Yes*	other requirements in 314 CMR 7.05(☐ Yes* ☐ No 19a. Explain why you do not have the ☐ Yes ☐ No 21. Are you implementing your IWPS ☐ Yes ☐ No Monitoring, Reporting & ☐ 1. Are you keeping your currently effeoperation and maintenance manual(s) ☐ Yes* ☐ No 2. Are you keeping all your required records, operation and maintenance requiring implementation of the safety at least three years? ☐ Yes* ☐ No



Bureau of Waste Prevention - Industrial Wastewater

BWP IW 38 & BWP IW 39

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D. Monitoring, Reporting & Recordkeeping (continued)

3. [Reserved for Toxics Reporting]

Additional reporting requirements will be added to this section in the future.

E. General & Specific Prohibitions

 After carefully reviewing all of the general and specific prohibitions listed below, are you in compliance with these General and Specific Prohibitions? 		
⊠ Yes*	☐ No	*If Yes, read Section F and then complete Section G.
1a. Identify all the prohibitions you are not in compliance with and explain why. Attach an additional sheet of paper to this form, if necessary.		

- 1. General Prohibitions. The permittee shall not:
 - a. Discharge, or cause to be discharged to a POTW, any substances, materials, or wastewater that may:
 - i. harm the sewers, POTW wastewater treatment process or equipment;
 - ii. have an adverse impact on the receiving waters; or
 - iii. otherwise create a nuisance or endanger public health, safety, or the environment.
 - b. Introduce pollutants into POTWs that pass through the POTW or interfere with its operation or performance.
 - c. Discharge wastewater or allow discharge of wastewater through any sewer connection that would result in a hazard to the public health or safety.
 - d. Discharge bypass wastewater or allow discharge of bypass wastewater through any sewer connection. If bypassing due to an emergency condition occurs, the Department and POTW shall be notified in accordance with 314 CMR 7.04(3). Such notification or its acknowledgement shall not be construed as permission by the Department or POTW to discharge bypass wastewater.
 - e. Discharge hazardous waste or allow the discharge of hazardous waste through any sewer connection.
- **2. Specific Prohibitions.** The permittee shall not introduce into a POTW or its wastewater collection system the following:
 - a. Pollutants which may create a fire, explosion, or other hazard in the POTW or its wastewater collection system.
 - b. Pollutants which may cause corrosive structural damage to the POTW or its wastewater collection system. In no case shall discharges with a pH lower than 5.0 Standard Unit (S.U) or more than 10.0 S.U. be allowed, unless the local limit allows such discharges.
 - c. Solid or viscous pollutants in amounts which may cause obstruction to the flow in the POTW or its wastewater collection system or may result in interference.
 - d. Any pollutant, including oxygen-demanding pollutants, discharged at a flow rate or pollutant concentration that will cause interference with the POTW or its wastewater collection system.
 - e. Heat in amounts which may inhibit biological activity in the POTW, resulting in interference. In no case shall heat in such quantities that the temperature at the POTW treatment plant exceeds 40° C (104° F) be discharged, unless the Department, upon request of the POTW, approves alternate temperature limits.



Bureau of Waste Prevention - Industrial Wastewater

BWP IW 38 & BWP IW 39

Permit for Industrial Sewer User

W201133 Transmittal Number

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F. Additional Conditions

- a. All discharges shall be in compliance with the terms and conditions of this permit. The discharge of any wastewater at a level in excess of that identified and authorized by this permit shall constitute a violation of the terms and conditions of this permit. Such a violation may result in the imposition of civil and/or criminal penalties as provided for in M.G.L. c.21, Section 42.
- b. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:
 - i. Violation of any terms or conditions of the permit;
 - ii. Obtaining a permit by misrepresentation or failure to disclose fully all relevant facts; or iii. A change in conditions or the existence of a condition, which requires either a temporary or permanent reduction, or elimination of the authorized discharge.
- c. The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges; nor does it authorize or relieve the permittee of any liability for any injury to private property or any invasion of personal rights; nor any infringement of Federal, State, or local laws or regulations; nor does it waive the necessity of obtaining any local assent required by law for the discharge authorized herein by the Department.
- d. The provisions of this permit are severable, and the invalidity of any condition or subdivision thereof shall not make void any other condition or subdivision thereof.
- e. All information and data provided by an applicant or a permittee identifying the nature and frequency of a discharge shall be available to the public without restriction. All other information (other than effluent data) which may be submitted by an applicant in connection with a permit application shall also be available to the public unless the applicant or permittee is able to demonstrate that the disclosure of such information or particular part thereof to the general public would divulge methods or processes entitled to protection as trade secrets in accordance with the provisions of M.G.L. c.21, Section.27(7). Where the applicant or permittee is able to so demonstrate, the Department shall treat the information or the particular part (other than effluent data) as confidential and not release it to any unauthorized person. Such information may be divulged to other officers, employees, or authorized representatives of the Commonwealth or the United States Government concerned with the protection of public water or water supplies.
- f. Transfer of Permits. Any sewer system connection permit authorizing an industrial discharge to a sewer system is only valid for the person to whom it is issued, unless prior to transfer:
 - i. The current permittee notifies the Department in writing at least 30 days in advance of the proposed transfer date; and
 - ii. The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibilities, and liability to the new permittee.
- g. This permit authorizing the discharge expires five (5) years from the date of issuance. The permittee shall apply for a renewal of this permit at least ninety (90) days prior to the expiration date, in accordance with 314 CMR 7.09(3)(b) for continued lawful discharges beyond the expiration date.
- h. All solids, sludge, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be collected, treated, and disposed of in accordance with applicable provisions in the following:
 - i. Hazardous waste regulations (310 CMR 30.000).
 - ii. Solid waste regulations (310 CMR 19.00).
 - iii. Sewer discharge regulations (314 CMR 7.00).
 - iv. Any other applicable federal, state and local laws.
- i. All samples shall be analyzed by a Massachusetts Certified Laboratory.
- j. The permittee shall provide the Department, and the Department's employees, authorized representatives and contractors, access at to the facility at all reasonable times, including during wastewater treatment system operation or wastewater discharge, for purposes of conducting activities related to oversight of this permit, including inspections to monitor compliance with the terms herein. The permittee shall allow the Department to obtain information related to compliance with the requirements of this permit. Notwithstanding any provision of this permit, the Department retains all of its access authorities and rights under applicable state and federal law.



Bureau of Waste Prevention - Industrial Wastewater

BWP IW 38 & BWP IW 39

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G. Certification Statement

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true accurate, and complete. I certify that this facility is in compliance with all conditions and requirements of this permit, and all applicable statutes and regulations. I further certify that systems to maintain compliance are in place at the facility or unit and will be maintained even if processes or operating procedures are changed. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment of knowing violations."

(I will be responsible for publication of public notice of the applicable permit proceedings identified under 314 CMR 2.06(1)(a) through (d).)

Printed Name of Applicant
Operations Manager
Title
Signature of Applicant
Date Signed
Paul Richard, EnviroBusiness, Inc.
Name of Preparer
Program Director
Title
(781) 273-2500
Phone Number

Michael Guidoboni

MassDEP Use Only

Special Conditions:		
	Massachusetts General Laws, Chapter 21, Section 43 and The permittee shall comply with all of the provisions contained in porated and made part of this permit.	
Date Issued		
Permit Effective Date	Permit Expiration Date	
Name of Regional BWP Section Chief	Signature	



Bureau of Waste Prevention – Industrial Wastewater

Additional IWPS Form Use With BWP IW 38 & BWP IW 39

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Permit Code

Instructions: Submit a completed copy of this form for each additional Industrial Wastewater Pretreatment System (IWPS) not identified on your BWP IW 38/BWP IW 39 permit application.

Industrial Wastewater Pretreatment System (IWPS) Information

NOTE: Question numbers on this form are identical with those on the BWP IW 38/BWP IW 39 permit application or Industrial Sewer Connection Certification forms. Questions 1 and 1a have been intentionally omitted.

1b. Please provide a ATC Pretreatment Syldentifier/Name	unique identifier (i.e. name /stem - Outfall NS02	e) for this IWPS:
4,300 Gallons Per Day	Design Capacity of this IW	_
200 Gallons Per Day	age Daily Flow of this IPWS	6? (Estimate if this is a new facility.)
1e. What is the Maxir 258 Gallons Per Day	mum Daily Flow of this IWF	PS? (Estimate if this is a new facility.)
		eet all local discharge standards and the applicable 0 CFR Chapter I, Subchapter N?
⊠ Yes	□ No*	*If No, you must take immediate steps to address the non-compliance BEFORE you can submit this application.
3. Does this IWPS tre as defined in 314 CM		stewater or hazardous industrial wastewater sludge
☐ Yes	⊠ No*	*If No, skip to Question 12.
3a. Are you treating oproducts?	concentrated chemical bath	ns, e.g. spent chemical baths, or off-specification
☐ Yes	⊠ No*	*If No, skip to Question 4.
3b. If Yes, describe the	ne concentrated chemical b	paths you are treating:



Additional IWPS Form Use With BWP IW 38 & BWP IW 39

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IWPS	Information	(continued)

	(continued)	
4. Does your IWPS n process" as defined i		reatment which is an integral part of the manufacturing
⊠ Yes*	□ No	*If Yes, skip to Question 7.
		or hazardous industrial wastewater sludge that is rocesses and stored in tanks or containers?
located in a Drinking W	ater Zone (see Section 17C o	dous industrial wastewater or sludge and your IWPS is f the Instructions; reference language in 310 CMR 30.605), P IW 39 permit. You must use form BWP IW 40 instead.
☐ Yes	□ No*	*If No, skip to Question 7.
	nnce with the requirements 7C in the Instructions)	for tanks and containers in 310 CMR 30.342 and
☐ Yes	□ No*	*If No, you must take immediate steps to address the non-compliance BEFORE you can submit this application.
7. Do you have a U.S identification number		Agency (EPA) hazardous waste generator
⊠ Yes	□ No*	*If No, skip to Question 7b.
7a. What is your EPA	A identification number?	
MAD 000844498 EPA ID #		Skip to Question 8.
7b. Explain why you	do not have an EPA identif	ication number.
8 Do you have a visi	ble sign in place that warns	s against unauthorized entry into the IWPS area?
•		
⊠ Yes*	□ No	*If Yes, skip to Question 9.
8a. Explain why you	do not have a visible sign i	n place.
3		



Additional IWPS Form Use With BWP IW 38 & BWP IW 39

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Additional	IWPS	Information	(continued)	
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9.Do you have the required spill containment for the IWPS? (See Section 17C in the Instructions.)			
⊠ Yes*	□ No	*If Yes, skip to Question	on 10.
9a. Explain why you	do not have the required s	pill containment.	
10. Is your IWPS loc Instructions.)	ated on land subject to floo	oding from a 100-year	storm? (See Section 17C in the
☐ Yes	⊠ No*	*If No, skip to Questio	n 12.
11. Are you in compl		ng provisions in 310 C	MR 30.701(2)? (See Section
☐ Yes*	□No	*If Yes, skip to Question	on 12.
11a. Explain why you	u are not in compliance wit	h the flood-proofing p	rovisions in 310 CMR 30.701(2).
12. What type of IWF	PS do you have? (Check a	ll that apply.)	
☐ Fully Automated I	ndustrial Wastewater Pretr	eatment System (FAI	WPS)
□ Continuous Disch	arge IWPS	Batch IWPS	
13. Is the IWPS exempt from classification? (See Section 17C in the Instructions.)			
☐ Yes*	⊠ No	*If Yes, skip to Question	on 14.
13a. What is the clast Treatment Facilities.	ssification of this IWPS? (S	ee 257 CMR 2.13: Cla	assification of Wastewater
☐ Class 1I	⊠ Class 2I		☐ Class 3I
☐ Class 4I	☐ Class 5 or 60		☐ Class 1M
☐ Class 2M	☐ Class 3M		☐ Class 4M



Additional IWPS Form Use With BWP IW 38 & BWP IW 39

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Additional IWPS Information (continued)

13b. How was the IWPS' classification determined?		
☐ 13b1. In accordance with the requirements in 314 CMR 7.05(2)(g) 4. c. or d.		
⊠ 13b2. By the Boa	rd of Certification of Operat	ors of Wastewater Treatment Facilities
☐ 13b3. Both		
14. Is the IWPS staff 17C in the Instruction		requirements of 314 CMR 7.05(2)(g) 5? (See Section
⊠ Yes*	□ No	*If Yes, skip to Question 15.
14a. Explain why the	e IWPS is not staffed in acc	ordance with 314 CMR 7.05(2)(g) 5.
	oplication a request for mod	rmit Category BWP IW 38 or BWP IW 39 for the lification of the IWPS that currently has a BWP IW 38
⊠ Yes*	□ No	*If Yes, you need to submit as an attachment the process flow diagram and description of the principal treatment processes for your IWPS.
16. How many attach	nments are included with th	is application in response to Question 15?
2: See Attachments Number of Attachments	D and E	_
17. Have your sewer connection and IWPS been designed and constructed in compliance with the design and construction standards as set forth in 314 CMR 7.05(2)(g)3?		
⊠ Yes	□ No*	*If No, skip to Question 17b.
17a. What is the Masengineering plans?	ssachusetts Registered Pro	ofessional Engineer (MAPE) signature date on the
1-4-08		Skip to Question 18.
Date		



Additional IWPS Form Use With BWP IW 38 & BWP IW 39

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		on and IWPS have not been designed and constructed in uction standards as set forth in 314 CMR 7.05(2)(g)3.
	signed your engineering	isetts Registered Professional Engineer (MAPE) who reviewed, plans: (781) 273-2500
18a. Name		18b. Phone Number
39510		Civil
18c. Mass. P.E. L	icense Number	18d. Mass. P.E. Specialty
other requiren	nents in 314 CMR 7.05(2	
⊠ Yes*	☐ No	*If Yes, skip to Question 20.
19a. Explain v	vhy you do not have an I'	WPS operation and maintenance manual.
20. Are you ke	eeping your IWPS operat	tion and maintenance manual current?
⊠ Yes	☐ No	
21. Are you im	nplementing your IWPS o	operation and maintenance plan manual?
⊠ Yes	□ No	

- Main Pretreatment Facility
- ATC Pretreatment System



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Toxic Pollutants Form Use With BWP IW 38 & BWP IW 39

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130595 – **Main Pretreat**Facility ID# (if known)

Permit Code

Instructions: For the following groups of pollutants, check all that you know to be present in your industrial wastewater before pretreatment, and provide concentrations for the specific pollutants in the checked group(s).

For all Volatile Organic Compounds (VOCs), provide concentrations in micrograms per liter (ug/L):

Pollutant Name	Concentration
101. acrolein	Below Detection Limit (BDL)
	ug/L
102. acrylonitrile	BDL ug/L
103. benzene	BDL
	ug/L
104. bis (chloromethyl) ether	BDL
	ug/L
105. bromoform	BDL
400	ug/L
106. carbon tetrachloride	BDL ug/L
107. chlorobenzene	BDL
107. Chioropenzene	ug/L
108. chlorodibromomethane	BDL
100. Chlorodistornomethalic	ug/L
109. chloroethane	BDL
	ug/L
110. 2-chloroethylvinyl ether	BDL
•	ug/L
111. chloroform	BDL
	ug/L
112. dichlorobromomethane	BDL
440 11 11 111	ug/L
113. dichlorodifluoromethane	BDL ug/L
114. 1,1-dichloroethane	BDL
114. 1, 1-dichiordethane	ug/L
115. 1,2-dichloroethane	BDL
,	ug/L
116. 1,1-dichloroethylene	BDL
•	ug/L
117. 1,2-dichloropropane	BDL
	ug/L
118. 1,2-dichloropropylene	BDL
440	ug/L
119. ethylbenzene	BDL ug/L
120 methyl bramida	BDL
120. methyl bromide	ug/L
121. methyl chloride	BDL
	ug/L



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Toxic Pollutants Form Use With BWP IW 38 & BWP IW 39

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130595 – **Main Pretreat**Facility ID# (if known)

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100. Volatiles (continued)

Pollutant Name	Concentration
122. methylene chloride	BDL
·	ug/L
123. 1,1,2,2-tetrachloroethane	BDL
	ug/L
124. tetrachloroethylene	BDL
	ug/L
125. toluene	BDL
	ug/L
126. 1,2-trans-dichloroethylene	BDL
	ug/L
127. 1,1,1-trichloroethane	BDL
	ug/L
128. 1,1,2-trichloroethane	BDL
	ug/L
129. trichloroethylene	BDL
	ug/L
130. trichlorofluoromethane	BDL
	ug/L
131. vinyl chloride	BDL
	ug/L

⊠ 200. Acid Compounds

For all Acid Compounds, provide concentrations in micrograms per liter (ug/L):

Pollutant Name	Concentration
201. 2-chlorophenol	BDL
	ug/L
202. 2,4-dichlorophenol	BDL
	ug/L
203. 2,4-dimethylphenol	BDL
	ug/L
204. 4,6-dinitro-o-cresol	BDL
	ug/L
205. 2,4-dinitrophenol	BDL
	ug/L
206. 2-nitrophenol	BDL
	ug/L
207. 4-nitrophenol	BDL
	ug/L
208. p-chloro-m-cresol	BDL
	ug/L
209. pentachlorophenol	BDL
	ug/L
210. phenol	BDL
	ug/L
211. 2,4,6-trichlorophenol	BDL
	ug/L



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☒ 300. Base/Neutral Compounds

For all Base/Neutral Compounds, provide concentrations in micrograms per liter (ug/L):

Pollutant Name	Concentration
301. acenaphthene	BDL
	ug/L
302. acenaphthylene	BDL
	ug/L
303. anthracene	BDL
	ug/L
304. benzidine	BDL
	ug/L
305. benzo(a)anthracene	BDL
	ug/L
306. benzo(a)pyrene	BDL
	ug/L
307. 3,4-benzofluoranthene	BDL
	ug/L
308. benzo(ghi)perylene	BDL
	ug/L
309. benzo(k)fluoranthene	BDL
· ,	ug/L
310. bis(2-chloroethoxy)methane	BDL
, , , , , , , , , , , , , , , , , , , ,	ug/L
311. bis(2-chloroethyl)ether	BDL
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	ug/L
312. bis(2-chloroisopropyl)ether	BDL
0 · = · 0 · 0 (= 0 · · · · · · · · · · · · · · · · · ·	ug/L
313. bis(2-ethylhexyl)phthalate	BDL
, , , , , , , , , , , , , , , , , , ,	ug/L
314. 4-bromophenyl phenyl ether	BDL
, , , , , , , , , , , , , , , , , , , ,	ug/L
315. butylbenzyl phthalate	BDL
σ · σ · σ · σ · σ · σ · σ · σ · σ · σ ·	ug/L
316. 2-chloronaphthalene	BDL
	ug/L
317. 4-chlorophenyl phenyl ether	BDL
	ug/L
318. chrysene	BDL
5 · 5 · 5 · 1 · 1 · 1 · 1 · 1 · 1 · 1 ·	ug/L
319. dibenzo(a,h)anthracene	BDL
0.0. a 0 <u>- a a. a a. a a.</u>	ug/L
320. 1,2-dichlorobenzene	BDL
5_5. 1,E diomo. 5551.E0110	ug/L
321. 1,3-dichlorobenzene	BDL
52 1,0 diomo.050m20m0	ug/L
322. 1,4-dichlorobenzene	BDL
522. 1,1 diomorosonizono	ug/L
323. 3,3'-dichlorobenzidine	BDL
525. 0,0 diomoroportzidirio	ug/L
	~g/ =



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300. Base/Neutral Compounds (continued)	
Pollutant Name	Concentration
324. diethyl phthalate	BDL
325. dimethyl phthalate	ug/L BDL
	ug/L BDL
326. di-n-butyl phthalate	ug/L
327. 2,4-dinitrotoluene	BDL ug/L
328. 2,6-dinitrotoluene	BDL
329. di-n-octyl phthalate	ug/L BDL
330. 1,2-diphenylhydrazine (as azobenzene)	ug/L BDL
	ug/L
331. fluoranthene	BDL ug/L
332. fluorine	BDL
333. hexachlorobenzene	ug/L BDL
334. hexachlorobutadiene	ug/L BDL
	ug/L
335. hexachlorocyclopentadiene	BDL ug/L
336. hexachloroethane	BDL ug/L
337. indeno(1,2,3-cd)pyrene	BDL
338. isophorone	ug/L BDL
·	ug/L
339. naphthalene	BDL ug/L
340. nitrobenzene	BDL ug/L
341. N-nitrosodimethylamine	BDL
342. N-nitrosodi-n-propylamine	ug/L BDL
	ug/L BDL
343. N-nitrosodiphenylamine	ug/L
344. phenanthrene	BDL ug/L
345. pyrene	BDL
346. 1,2,4-trichlorobenzene	ug/L BDL
	ug/L



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For all Pesticides, provide concentrations in micrograms per liter (ug/L):

Pollutant Name	Concentration
401. aldrin	0.111
	ug/L
402. alpha-BHC	BDL
	ug/L
403. beta-BHC	BDL ug/L
404. gamma-BHC	BDL
10 1. gamma Bilo	ug/L
405. delta-BHC	BDL
	ug/L
406. chlordane	BDL
	ug/L
407. 4,4'-DDT	BDL
400 4 4! DDE	ug/L
408. 4,4'-DDE	BDL ug/L
409. 4,4'-DDD	BDL
100. 1,1 222	ug/L
410. dieldrin	BDL
	ug/L
411. alpha-endosulfan	BDL
	ug/L
412. beta-endosulfan	BDL
413. endosulfan sulfate	ug/L BDL
413. endosulian sullate	ug/L
414. endrin	BDL
	ug/L
415. endrin aldehyde	BDL
•	ug/L
416. heptachlor	BDL
447 hantaahlaran saids	ug/L
417. heptachlor epoxide	BDL ug/L
418. PCB-1242	BDL
	ug/L
419. PCB-1254	BDL
	ug/L
420. PCB-1221 421. PCB-1232	BDL
	ug/L
	BDL
422 DCD 4249	ug/L BDL
422. PCB-1248	ug/L
423. PCB-1260	BDL
	ug/L



Toxic Pollutants Form Use With BWP IW 38 & BWP IW 39

W201133 Transmittal Number 130595 – Main Pretreat Facility ID# (if known)

Permit Code

400. Pesticides	
Pollutant Name	Concentration
424. PCB-1016	BDL ug/L
425. toxaphene	BDL ug/L
500. Total Toxic Pollutants*	0.111 [1] ug/L

^{*}Use this total in your answer to Question 6b in Section B of the BWP IW 38 & BWP IW 39 Permit for Industrial Sewer User application

[1] Sampling data from combined outfall S01 and CO1 (Refer to Attachment A)



Bureau of Waste Prevention – Industrial Wastewater

Toxic Pollutants Form Use With BWP IW 38 & BWP IW 39

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130595 – ATC Pretreat
Facility ID# (if known)

Permit Code

Instructions: For the following groups of pollutants, check all that you know to be present in your industrial wastewater before pretreatment, and provide concentrations for the specific pollutants in the checked group(s).

For all Volatile Organic Compounds (VOCs), provide concentrations in micrograms per liter (ug/L):

Pollutant Name	Concentration
101. acrolein	Below Detection Limit (BDL)
400 condonitrilo	ug/L
102. acrylonitrile	BDL ug/L
103. benzene	BDL
	ug/L
104. bis (chloromethyl) ether	BDL
	ug/L
105. bromoform	2.5
106. carbon tetrachloride	ug/L BDL
100. Carbon tetrachionde	ug/L
107. chlorobenzene	BDL
	ug/L
108. chlorodibromomethane	4.6
	ug/L
109. chloroethane	BDL
440. O oblava othrub david othra	ug/L
110. 2-chloroethylvinyl ether	BDL ug/L
111. chloroform	3.8
	ug/L
112. dichlorobromomethane	5.6
	ug/L
113. dichlorodifluoromethane	BDL
114. 1,1-dichloroethane	ug/L BDL
114. 1,1-dictilordetriane	ug/L
115. 1,2-dichloroethane	BDL
,	ug/L
116. 1,1-dichloroethylene	BDL
	ug/L
117. 1,2-dichloropropane	BDL
118. 1,2-dichloropropylene	ug/L BDL
110. 1,2-diciliotopiopylene	ug/L
119. ethylbenzene	BDL
·	ug/L
120. methyl bromide	BDL
404 months distributed	ug/L
121. methyl chloride	BDL ug/L
	ug/L



Bureau of Waste Prevention – Industrial Wastewater

Toxic Pollutants Form Use With BWP IW 38 & BWP IW 39

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100. Volatiles (continued)	
Pollutant Name	Concentration
122. methylene chloride	BDL
	ug/L
123. 1,1,2,2-tetrachloroethane	BDL
	ug/L
124. tetrachloroethylene	BDL
	ug/L
125. toluene	BDL
	ug/L
126. 1,2-trans-dichloroethylene	BDL
	ug/L
127. 1,1,1-trichloroethane	BDL
	ug/L
128. 1,1,2-trichloroethane	BDL
	ug/L
129. trichloroethylene	BDL
	ug/L
130. trichlorofluoromethane	BDL
	ug/L
131. vinyl chloride	BDL
	ug/L

⊠ 200. Acid Compounds

For all Acid Compounds, provide concentrations in micrograms per liter (ug/L):

Pollutant Name	Concentration
201. 2-chlorophenol	BDL
·	ug/L
202. 2,4-dichlorophenol	BDL
	ug/L
203. 2,4-dimethylphenol	BDL
	ug/L
204. 4,6-dinitro-o-cresol	BDL
	ug/L
205. 2,4-dinitrophenol	BDL
	ug/L
206. 2-nitrophenol	BDL
-	ug/L
207. 4-nitrophenol	BDL
	ug/L
208. p-chloro-m-cresol	BDL
	ug/L
209. pentachlorophenol	BDL
	ug/L
210. phenol	BDL
	ug/L
211. 2,4,6-trichlorophenol	BDL
	ug/L



Bureau of Waste Prevention – Industrial Wastewater

Toxic Pollutants Form Use With BWP IW 38 & BWP IW 39

W201133 Transmittal Number 130595 – ATC Pretreat

Facility ID# (if known)

Permit Code

☒ 300. Base/Neutral Compounds

For all Base/Neutral Compounds, provide concentrations in micrograms per liter (ug/L):

Pollutant Name	Concentration
301. acenaphthene	BDL
	ug/L
302. acenaphthylene	BDL
	ug/L
303. anthracene	BDL
	ug/L
304. benzidine	BDL
	ug/L
305. benzo(a)anthracene	BDL
	ug/L
306. benzo(a)pyrene	BDL
	ug/L
307. 3,4-benzofluoranthene	BDL
	ug/L
308. benzo(ghi)perylene	BDL
	ug/L
309. benzo(k)fluoranthene	BDL
	ug/L
310. bis(2-chloroethoxy)methane	BDL
	ug/L
311. bis(2-chloroethyl)ether	BDL
	ug/L
312. bis(2-chloroisopropyl)ether	BDL
	ug/L
313. bis(2-ethylhexyl)phthalate	BDL
	ug/L
314. 4-bromophenyl phenyl ether	BDL
0.5	ug/L
315. butylbenzyl phthalate	BDL
040 0 11 14 1	ug/L
316. 2-chloronaphthalene	BDL
047 4 ablamant and aband ather	ug/L
317. 4-chlorophenyl phenyl ether	BDL
318. chrysene	ug/L
	BDL
319. dibenzo(a,h)anthracene	ug/L
	BDL
320. 1,2-dichlorobenzene	ug/L BDL
224 4.2 dieblerebenzene	ug/L
321. 1,3-dichlorobenzene	BDL
222 1 4 diablarahan-ana	ug/L
322. 1,4-dichlorobenzene	BDL
200 2 2 diablarahara-i-lia-	ug/L
323. 3,3'-dichlorobenzidine	BDL
	ug/L



Massachusetts Department of Environmental ProtectionBureau of Waste Prevention – Industrial Wastewater

Toxic Pollutants Form Use With BWP IW 38 & BWP IW 39

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Transmittal Number

130595 – **ATC Pretreat**

Facility ID# (if known)

Permit Code

Pollutant Name	Concentration
324. diethyl phthalate	BDL
	ug/L
325. dimethyl phthalate	BDL
	ug/L
326. di-n-butyl phthalate	BDL
, ,	ug/L
327. 2,4-dinitrotoluene	BDL
	ug/L
328. 2,6-dinitrotoluene	BDL
•	ug/L
329. di-n-octyl phthalate	BDL
5_5, 5, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7,	ug/L
330. 1,2-diphenylhydrazine (as azobenzene)	BDL
obot 1,2 diprioriyiriyarazirio (do dzobotizotio)	ug/L
331. fluoranthene	BDL
oor. Indorantifiche	ug/L
332. fluorine	BDL
332. Ildollile	ug/L
333. hexachlorobenzene	
333. Hexachiorobenzene	BDL
204 haveablaschutadiana	ug/L
334. hexachlorobutadiene	BDL
005	ug/L
335. hexachlorocyclopentadiene	BDL
	ug/L
336. hexachloroethane	BDL
	ug/L
337. indeno(1,2,3-cd)pyrene	BDL
	ug/L
338. isophorone	BDL
	ug/L
339. naphthalene	BDL
	ug/L
340. nitrobenzene	BDL
	ug/L
341. N-nitrosodimethylamine	BDL
	ug/L
342. N-nitrosodi-n-propylamine	BDL
,	ug/L
343. N-nitrosodiphenylamine	BDL
•	ug/L
344. phenanthrene	BDL
•	ug/L
345. pyrene	BDL
F.)	ug/L
346. 1,2,4-trichlorobenzene	BDL
0.0,=, 1 0.0000000000000000000000000000000000	ug/L



Massachusetts Department of Environmental ProtectionBureau of Waste Prevention – Industrial Wastewater

Toxic Pollutants Form Use With BWP IW 38 & BWP IW 39

W201133 Transmittal Number

130595 – ATC Pretreat

Facility ID# (if known)

Permit Code

For all Pesticides, provide concentrations in micrograms per liter (ug/L):

Pollutant Name	Concentration
401. aldrin	BDL
	ug/L
402. alpha-BHC	BDL
400 hata DUO	ug/L
403. beta-BHC	BDL ug/L
404. gamma-BHC	BDL
404. gamma Brio	ug/L
405. delta-BHC	BDL
	ug/L
406. chlordane	BDL
	ug/L
407. 4,4'-DDT	BDL
400 4 4 555	ug/L
408. 4,4'-DDE	BDL ug/L
409. 4,4'-DDD	BDL
409. 4,4 -000	ug/L
410. dieldrin	BDL
	ug/L
411. alpha-endosulfan	BDL
•	ug/L
412. beta-endosulfan	BDL
	ug/L
413. endosulfan sulfate	BDL
414. endrin	ug/L BDL
414. endin	ug/L
415. endrin aldehyde	BDL
	ug/L
416. heptachlor	BDL
·	ug/L
417. heptachlor epoxide	BDL
440 505 4040	ug/L
418. PCB-1242	BDL
419. PCB-1254	ug/L BDL
419. PCB-1234	ug/L
420. PCB-1221	BDL
120.1 05 1221	ug/L
421. PCB-1232	BDL
	ug/L
422. PCB-1248	BDL
	ug/L
423. PCB-1260	BDL
	ug/L



Massachusetts Department of Environmental Protection

Bureau of Waste Prevention – Industrial Wastewater

Toxic Pollutants Form Use With BWP IW 38 & BWP IW 39

W201133
Transmittal Number
130595 – ATC Pretreat
Facility ID# (if known)

Permit Code

 400. Pesticides

 Pollutant Name
 Concentration

 424. PCB-1016
 BDL ug/L

 425. toxaphene
 BDL ug/L

 500. Total Toxic Pollutants*
 16.5 [1]

[1] Sampling data from outfall NS02 following pretreatment (Refer to Attachment A)

^{*}Use this total in your answer to Question 6b in Section B of the BWP IW 38 & BWP IW 39 Permit for Industrial Sewer User application

Attachment A

Wastewater Sampling Results

- Main Pretreatment Facility
- ATC Pretreatment System

I. MAIN PRETREATMENT FACILITY SAMPLING DATA

S01 Combined Discharge

C01 Discharge from Main Pretreatment Facility

COIA Main Process Tank

C01B Concentrated Copper/Nickel Rinses

COIC Concentrated Tin Rinses

2 ATC PRETREATMENT SYSTEM SAMPLING DATA

NS02 Discharge from ATC Pretreatment System

C02 ATC Industrial Wastewater

Combined Discharge (Main Pretreatment System Effluent and Sanitary Wastewater) 2007 Wastewater Sampling Results Outfall S01

Parameter	Units	POTW Discharge Limitation	Sample Type	Sampling Frequency	1stQ 2007	2ndQ 2007	3rdQ 2007	4thQ 2007
Metals, Cyanide and Phenols	lenols							
Alıminim	ma/L	no limit	composite	quarterly	0.31	0.12	0.11	Q.
Antimony	mg/L	no limit	composite	quarterly	QN	ND	ND	GN
Arsenic	ma/L	0.42	composite	quarterly	QV	QΝ	QN	Q
Bervllium	ma/L	0.12	composite	quarterly	QN	QΝ	ND	Q.
Cadmium	ma/L	0.10	composite	quarterly	ΩN	QΝ	QN	QN
Chromium	ma/L	0.77	composite	quarterly	ΩN	QN	ND	GΝ
Copper	ma/L	0:30	composite	quarterly	960.0	0.039	0.047	0.057
Lead	mg/L	0.10	composite	quarterly	ON	QΝ	DD	Q.
Mercury	mg/L	0.0007	composite	quarterly	ND	ΔN	ON	S
Nickel	mo/L	0.60	composite	quarterly	QN	QN	ON	GΝ
Selenium	ma/L	0.81	composite	quarterly	Q	ΩN	ON	GΝ
Silver	mg/L	0.25	composite	quarterly	ON	ΔN	ND	QN
Thaltium	T/bu	0.93	composite	quarterly	ND	QN	Q	9
Zinc	mg/L	3.70	composite	quarterly	0.092	9	9	0.056
Cyanide	mg/L	0.45	grab	quarterly	ND	ΔN	Ω	g
Phenols, Total	mg/L	no limit	grab	quarterfy	0.20	QN	0.05	g
Toxic Pollutants								

TTO (624&625)	mg/L	2,130			370.1			
EPA 624 (volatiles)	T/6ri	see TTO limit	grab	annually	370[1]			
EPA 625 (SVOCs)	μg/L	see TTO limit	composite	annually	0.111 [2]			
Oil & Grease and pH								
Oil & Grease	ma/L	100	grab	quarterty	40	17	16	13
		0000		4	0	0.0	0	0

Oil & Grease	mg/L	100	grab	quarterty	40	11	16	13
Hd	ns	6.0 - 9.0	cont.	cont.	6-9	6-9	6-9	6-9
Other Pollutants								
TSS	ma/L	350	composite	quarterly	53	32	32	34
Nitrogen, Ammonia	mg/L	90	composite	quarterly	30.1	24.6	18.3	14,6
Phosphorus, Total	mg/L	25	composite	quarterly	21	3.7	9.0	2.1
COD	mg/L	no limit	composite	quarterly	300	210	260	160
BOD.	1/000	250	atiscomon	nisteriv	066	260	240	150

Notes:
ND = Not Detected
[1] Acetone
[2] Aldrin

Internall Outfall C01 Main Pretreatment Facility Wastewater Sampling Results

Parameter	Units	Sample	Number	Maximum	Average	Sample
		Type	5	Concentration	Concentration	Dates
			Samples			
Metals, Cyanide and Phenols						
Copper	mg/L	grab	7	0.05	0.04	9/4-10/31/2007
Nickel	mg/L	grab		0.08	0.04	9/4-10/31/2007
Lead	mg/L	grab	7	0.02	0.01	9/4-10/31/2007
Antimony	mg/L	composite		QN		12/18/2007
Arsenic	mg/L	composite	_	QN		12/18/2007
Berylium	mg/L	composite	_	ON		12/18/2007
Cadmium	mg/L	composite	-	QN		12/18/2007
Chromium	mg/L	composite	-	QN		12/18/2007
Mercury	mg/L	composite	-	GN		12/18/2007
Selenium	mg/L	composite	•	QN		12/18/2007
Silver	mg/L	composite	_	QN		12/18/2007
Thallium	mg/L	composite	-	ON		12/18/2007
Zinc	mg/L	composite	-	ON		12/18/2007
Cyanide	mg/L	grab	,	0.039		12/18/2007

TTO (624&625)	l µg/L			270	
EPA 624 (volatiles)	mg/L	grab	_	270 [1]	12/18/2007
EPA 625 (SVOCs)	hg/L	grab	-	QN	12/18/2007

Other Pollutants						
158	mg/L	composite	-	12	The state of the s	12/18/2007
BODs	mg/L	composite	12	380	188	3/30-11/12/2007
Phosphorus	mg/L	composite	91	5.0	1.6	2/5 - 12/10/2007

Notes: ND = Not Detected [1] Acetone

Internall Outfall CO1A

Main Pretreatment Facility

Main Process Tank

Wastewater Sampling Results

Parameter	Units	Sample	Z		Average	Sample
	4 3 3 4 4 5 4 5 5 5 6 5 6 5 6 5 6 5 6 5 6 6 6 6	Vpe	of Samples	Concentration	Concentration Concentration	Care
Charles and the state of the st						
Copper	ma/L	grab	40	13.63	3.17	11/1-11/30/2007
OK DE	ma/L	grab	40	2.86	0.50	11/1-11/30/2007
Lead	mg/L	grab	40	0.16	0.02	11/1-11/30/2007

Internall Outfall C01B

Main Pretreatment Facility

Concentrated Copper/Nickel Rinses
2007 Wastewater Sampling Results

Parameter	Units	Sample Type	Number of Samples	Maximum Concentration	Maximum Average Concentration	Sample Dates
Formaldehyde Copper Nickel	mg/L mg/L mg/L	grab estimate estimate	ဇ	5,900	2,309 50-1000 50-1000	10/5 - 12/12/2007

Internall Outfall CO1C

Main Pretreatment Facility

Concentrated Tin Rinses

2007 Wastewater Sampling Results

Parameter	Units	Sample Type	Sample Number Type of Samples	Maximum Concentration	Maximum Average Concentration	Sample Dates
Thiourea	mg/L	grab	က	182	176	12/6/07, 12/7/07, 12/11/07

Outfall NS02

Advanced Technology Center - Fab 4 (ATC) Building 2007 Wastewater Sampling Results

		Discharge Limitation	Type	Frequency	2007	2007
Metals, Cyanide and Phenols	slo					
Antimony	mg/L	no limit	composite	semiannual	ON	ΩN
Arsenic	mg/L	0.42	composite	semiannuai	ON	ON
Beryllium	mg/L	0.12	composite	semiannuai	Q	2
Cadmium	√l/gm	0.02	composite	semiannual	QN	2
Chromium	mg/L	0.77	composite	semiannual	9	2
Copper	mg/L	0.3	composite	semiannual	0.014	0.025
Lead	mg/L	90.0	composite	semiannual	ON	Q.
Mercury	J/bw	0.0007	composite	semiannual	QN	QN
Nickel	mg/L	0.37	composite	semiannual	QN.	QN
Selenium	mg/L	0.81	composite	semiannual	ON	S
Silver	mg/L	0.01	composite	semiannual	QV	Q
Thallium	mg/L	0.93	composite	semiannual	QV	ON.
Zinc	mg/L	0.5	composite	semiannual	QN	ND
,						
Cyanide	mg/L	0.23	grab	semiannual	QN	QN
Phenols, Total	mg/L	no limit	grab	semiannual	QN	ON
loxic Pollurants						
TTO (624&625)	na/L	2,130			32.5	GN
EPA 624 (votatiles)	ng/L	see TTO limit	grab	semiannual	32.5 [1]	QN
EPA 625 (SVOCs)	mg/L	see TTO limit	composite	semiannual	_ ON	QN
Oil & Grease and oH						
Oil & Grease	mg/L	100	grab	semiannual	< 4.4	4 >
Hď	ns	6.0 - 9.0	cont.	cont.	6-9	6-9
		TATABAR PARTY AND A STATE OF THE STATE OF TH				
Other Pollutants						
TSS	mg/L	no limit	composite	semiannual	< 5	< 5
Nitrogen, Ammonia	mg/L	no limit	composite	semiannual	1.42	1.40
Phosphorus, Total	mg/L	no limit	composite	semiannual	0.02	0.13
doo	7/bw	no limit	composite	semiannual	250	85
000	27	timil on	otiscamoo	landando	٠ ۲	78

Notes: ND = Not Detected [1] Acetone = 16 mg/L

Internall Outfall C02 Advanced Technology Center - Fab 4 (ATC) Building ATC Industrial Wastewater

Parameter	ţ	Sample Type	Number of Samples	Maximum Concentration	Maximum Average Concentration Concentration	Sample Dates
Copper Nickel	mg/L mg/L	composite	4 4	0.160	n/a n/a	5/6/2005 5/6/2005

ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive Westborough, Massachusetts 01581-1019 (508) 898-9220 www.alphalab.com

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

CERTIFICATE OF ANALYSIS

Client: Rohm & Haas

Laboratory Job Number: L0700711

Address: 455 Forest Street

Marlboro, MA 01752

Date Received: 16-JAN-2007

Attn: Mr. Keith LeMaire Date Reported: 16-FEB-2007

Project Number:

Delivery Method: Client

Site:

QUARTERLY & ANNUAL

ALPHA SAMPLE NUMBER CLIENT IDENTIFICATION SAMPLE LOCATION

L0700711-01

A-H COMPOSITE

S01 OUTFALL S01 OUTFALL

L0700711-02

I-N GRAB

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized by: Technical Director

02160717:27 Page 1 of 24

ALPHA ANALYTICAL LABORATORIES NARRATIVE REPORT

Laboratory Job Number: L0700711

Report Submission

This report replaces the report issued February 1, 2007. At the client's request, the result for Total Aluminum has been added to L0700711-01.

The samples were received in accordance with the chain of custody and no significant deviations were encountered during preparation or analysis unless otherwise noted below.

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number: L0700711-01

Date Collected: 16-JAN-2007 08:30 A-H COMPOSITE

Sample Matrix: WATER Date Received: 16-JAN-2007 Date Reported: 16-FEB-2007

Condition of Sample: Satisfactory

Field Prep:

None

Number & Type of Containers: 4-Amber, 4-Plastic

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DA	TE	ID
					PREP	ANAL	
Solids, Total Suspended	53	mg/l	5.0	4 160.2	, ,	0119 14:3	D DW
Nitrogen, Ammonia	30.1	mg/l	0.375	44 350.1	0125 16:00	0126 11:2	4 AT
Phosphorus, Total	21	mg/l	0.25	4 365.2		0122 15:0	O HS
Chemical Oxygen Demand	300	mg/l	20	44 410.4		0122 10:1	5 DW
80D, 5 day	220	mg/l	50	4 405.1	0117 07:30	0122 12:1	0 DW
Fotal Metals				19 200.7			
Aluminum, Total	0.31	mg/l	0.10	19 200.7	0118 17:00	0123 09:5	7 MG
Antimony, Total	ND	mg/l	0.050	19 200.7	0118 17:00	0123 09:5	7 MG
Arsenic, Total	ND	mg/l	0.005	19 200,7	0118 17:00	0123 09:5	7 MG
Seryllium, Total	ND	mg/l	0.005	19 200.7	0118 17:00	0123 09:5	7 MG
Cadmium, Total	ИD	mg/l	0.005	19 200.7	0118 17:00	0123 09:5	7 MG
Chromium, Total	ND	mg/l	0.01	19 200.7	0118 17:00	0123 09:5	7 MG
Copper, Total	0.096	mg/l	0.010	19 200.7	0118 17:00	0123 09:5	7 MG
Sead, Total	ND	mg/l	0.010	19 200.7	0118 17:00	0123 09:5	7 MG
Mercury, Total	ND	mg/l	0.0002	4 245.2	0125 17:00	0126 10:3	3 DM
Nickel, Total	ND	mg/l	0.025	19 200.7	0118 17:00	0123 09:5	7 MG
Selenium, Total	ND	mg/l	0.010	19 200.7	0118 17:00	0123 09:5	7 MG
Silver, Total	ND	mg/l	0.007	19 200.7	0118 17:00	0123 09:5	7 MG
Challium, Total	ND	mg/l	0.020	19 200.7	0118 17:00	0123 09:5	7 MG
Binc, Total	0.092	mg/1	0.050	19 200.7	0118 17:00	0123 09:5	7 MG
SVOC's by GC/MS 625				5 625	0118 10:05	0120 15:2	8 RL
Acenaphthene	ND	ug/l	25.				
Benzidine	ND	ug/l	250				
l,2,4-Trichlorobenzene	ND	ug/l	25.				
lexachlorobenzene	ND	ug/l	25.				
Bis(2-chloroethyl)ether	ND	ug/l	25.				
2-Chloronaphthalene	ND	ug/l	30.				
l,2-Dichlorobenzene	ND	ug/l	25.				
l,3-Dichlorobenzene	ND	ug/l	25.				
l,4-Dichlorobenzene	ND	ug/l	25.				
3,3'-Dichlorobenzidine	ND	ug/l	250				
2,4-Dinitrotoluene	ND	ug/l	30.				

Comments: Complete list of References and Glossary of Terms found in Addendum ${\tt I}$

Laboratory Sample Number: L0700711-01

A-H COMPOSITE

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE ID PREP ANAL
					THE CHICAL
SVOC's by GC/MS 625 cont'd				5 625	0118 10:05 0120 15:28 RL
2,6-Dinitrotoluene	ND	ug/l	25.		
Azobenzene	ND	ug/l	25.		
Fluoranthene	ИD	ug/l	25.		
4-Chlorophenyl phenyl ether	ND	ug/l	25.		
4-Bromophenyl phenyl ether	ND	ug/l	25.		
Bis(2-chloroisopropyl)ether	ND	ug/l	25.		
Bis(2-chloroethoxy)methane	ND	ug/l	25.		
Hexachlorobutadiene	ND	ug/l	50.		
Hexachlorocyclopentadiene	ND	ug/l	150		
Hexachloroethane	ND	ug/l	25.		
Isophorone	ND	ug/l	25.		
Naphthalene	ND	ug/l	25.		
Nitrobenzene	ND	ug/l	25.		
NDPA/DPA	ND	ug/l	75.		
n-Nitrosodi-n-propylamine	ND	ug/l	25.		
Bis(2-ethylhexyl)phthalate	ND	ug/l	25.		
Butyl benzyl phthalate	ND	ug/l	25.		
Di-n-butylphthalate	ND	ug/l	25.		
Di-n-octylphthalate	ND	ug/l	25.		
Diethyl phthalate	ND	ug/l	25.		
Dimethyl phthalate	ND	ug/l	25.		
Benzo(a)anthracene	ND	ug/l	25.		
Benzo(a)pyrene	ND	ug/l	25.		
Benzo(b)fluoranthene	ND	ug/l	25.		
Benzo(k)fluoranthene	ND	ug/l	25.		
Chrysene	ND	ug/l	25.		
Acenaphthylene	ND	ug/l	25.		
Anthracene	ND	ug/l	25.		
Benzo(ghi)perylene	ND	ug/l	25.		
Fluorene	ND	ug/l	25.		
Phenanthrene	ND	ug/l	25.		
Dibenzo(a,h)anthracene	ND	ug/l	25.		
Indeno(1,2,3~cd)pyrene	ND	ug/l	35.		
Pyrene	ND	ug/l	25.		
Aniline	ND	ug/l	100		
4-Chloroaniline	ND	ug/l	25.		
l-Methylnaphthalene	ND	=			
2-Nitroaniline	ND	ug/l ug/l	25.		
3-Nitroaniline	ND		25.		
4-Nitroaniline	ND	ug/l	25.		
Dibenzofuran		ug/l	35.		
2-Methylnaphthalene	ND ND	ug/l	25.		
n-Nitrosodimethylamine	ND ND	ug/l	25.		
2,4,6-Trichlorophenol	ND	ug/1	250		
p-Chloro-m-cresol	ND ND	ug/l	25.		
p-Chioro-m-cresor 2-Chlorophenol	ND	ug/l	25.		
-	ND	ug/l	30.		
2,4-Dichlorophenol	ND	ug/l	50.		
2,4-Dimethylphenol	ND	ug/l	50.		
2-Nitrophenol	ND	ug/l	100		

Comments: Complete list of References and Glossary of Terms found in Addendum I

Laboratory Sample Number: L0700711-01

A-H COMPOSITE

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE ID
						PREP ANAL
SVOC's by GC/MS 625 cont'd				5	625	0118 10:05 0120 15:28 RL
4-Nitrophenol	ND	ug/l	50.			
2,4-Dinitrophenol	ND	ug/l	150			
4,6-Dinitro-o-cresol	ND	ug/l	100			
Pentachlorophenol	ND	ug/l	50.			
Phenol	ND	ug/l	35.			
2-Methylphenol	ND	ug/l	30.			
3-Methylphenol/4-Methylphenol	ND	ug/l	30.			
2,4,5-Trichlorophenol	ND	ug/l	25.			
2,6-Dichlorophenol	ИD	ug/l	50.			
Benzoic Acid	ИD	ug/l	250			
Benzyl Alcohol	ND	ug/l	50.			
Carbazole	ND	ug/l	25.			
Surrogate(s)	Recovery		QC Crit	eria	a .	
2-Fluorophenol	49.0	o o	21-120			
Phenol-d6	40.0	용	10-120			
Nitrobenzene-d5	82.0	9	23-120			
2-Fluorobiphenyl	79.0	96	43-120			
2,4,6-Tribromophenol	88.0	용	10-120			
4-Terphenyl-d14	88.0	olo o	33-120			
PCB/Pesticides				5	608	0123 14:05 0131 03:20 AK
Delta-BHC	ND	ug/l	0.022			
Lindane	ND	ug/l	0.022			
Alpha-BHC	ND	ug/l	0.022			
Beta-BHC	ND	ug/l	0.022			
Heptachlor	ND	ug/l	0.022			
Aldrin	0.111	ug/l	0.022			
Heptachlor epoxide	ND	ug/1	0.022			
Endrin	ND	ug/l	0.044			
Endrin aldehyde	ND	ug/l	0.044			
Endrin ketone	ND	ug/l	0.044			
Dieldrin	ND	ug/l	0.044			
4,4'-DDE	ND	ug/l	0.044			
4,4'-DDD	ND	ug/l	0.044			
4,4'-DDT	ND	ug/l	0.044			
Endosulfan I	ND	ug/l	0.022			
Endosulfan II	ND	ug/l	0.044			
Endosulfan sulfate	ND	ug/l	0.044			
Methoxychlor	ND	ug/l	0.222			
ľoxaphene	ND	ug/l	0.222			
Chlordane	ND	ug/l	0.222			
cis-Chlordane	ND	ug/l	0.022			
trans-Chlordane	ND	ug/l	0.022			
Aroclor 1016	ND	ug/l	0.278			
Aroclor 1221	ND	ug/l	0.278			
Aroclor 1232	ND	ug/l	0.278			
Aroclor 1242	ND	ug/l	0.278			
Aroclor 1248	ND	ug/l	0.278			

Comments: Complete list of References and Glossary of Terms found in Addendum I

Laboratory Sample Number: L0700711-01

A-H COMPOSITE

PARAMETER	RESULT	UNITS	RDI.	REF	METHOD	DA	TE	ID
						PREP	ANAL	
PCB/Pesticides cont'd				5	608	0123 14:05	0131 03:20	AK
Aroclor 1254	ND	ug/l	0.278					
Aroclor 1260	ND	ug/l	0.278					
Surrogate(s)	Recovery		QC Cri	teria	3			
2,4,5,6-Tetrachloro-m-xylene	54.0	9	30-150					
Decachlorobiphenyl	60.0	8	30-150					

 $\hbox{ {\tt Comments: Complete list of References and Glossary of Terms found in Addendum I}$

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number: L0700711-02

Date Collected: 16-JAN-2007 08:30

I-N GRAB Date Received: 16-JAN-2007 WATER Date Reported: 16-FEB-2007

Condition of Sample: Satisfactory

Sample Matrix:

Field Prep: None

Number & Type of Containers: 3-Amber, 1-Plastic, 2-Vial

PARAMETER	RESULT	UNITS	RDL	REF METHOD		D
					PREP ANAL	
Cyanide, Total	ND	mg/l	0.005	4 335.2	0126 16:30 0130 13:20 1	מט
Oil & Grease, Hem-Grav	40	mg/l	4.4	74 1664A	0125 13:30 0129 06:45 #	ΑT
Phenolics, Total	0.20	mg/l	0.03	4 420.1	0129 09:00 #	AT
Volatile Organics by GC/MS	624			5 624	0117 12:41 1	434
Methylene chloride	ND	ug/l	5.0			
1,1-Dichloroethane	ND	ug/l	1.5			
Chloroform	ND	ug/l	1.5			
Carbon tetrachloride	ND	ug/l	1.0			
1,2-Dichloropropane	ND	ug/l	3.5			
Dibromochloromethane	ND	ug/l	1.0			
1,1,2-Trichloroethane	ND	ug/l	1.5			
2-Chloroethylvinyl ether	ND	ug/l	10.			
Tetrachloroethene	ND	ug/l	1.5			
Chlorobenzene	ND	ug/l	3.5			
Trichlorofluoromethane	ND	ug/l	5.0			
1,2-Dichloroethane	ND	ug/l	1.5			
1,1,1-Trichloroethane	ND	ug/l	2.0			
Bromodichloromethane	ND	ug/l	1.0			
trans-1,3-Dichloropropene	ND	ug/l	1.5			
cis-1,3-Dichloropropene	ND	ug/l	1.5			
Bromoform	ND	ug/l	1.0			
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0			
Benzene	ND	ug/l	1.0			
Toluene	ND	ug/l	1.0			
Ethylbenzene	ND	ug/l	1.0			
Chloromethane	ND	ug/l	10.			
Bromomethane	ND	ug/l	5.0			
Vinyl chloride	ND	ug/1	2.0			
Chloroethane	ND	ug/l	2.0			
1,1-Dichloroethene	ND	ug/l	1.0			
trans-1,2-Dichloroethene	ND	ug/l	1.5			
cis-1,2-Dichloroethene	ND	ug/l	1.0			
Trichloroethene	ND	ug/l	1.0			
1,2-Dichlorobenzene	ND	ug/l	5.0			
1,3-Dichlorobenzene	ND	ug/l	5.0			
1,4-Dichlorobenzene	ND	ug/l	5.0			

 $\hbox{ {\tt Comments: Complete list of References and Glossary of Terms found in Addendum I}$

Laboratory Sample Number: L0700711-02

I-N GRAB

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DA	TE	ID
						PREP	ANAL	
Volatile Organics by GC/MS	624 cont'd			5	624		0117 12:41	мм
p/m-Xylene	ND	ug/l	2.0					
o-xylene	ND	ug/l	1.0					
Xylene (Total)	ND	ug/l	2.0					
Styrene	ND	ug/l	1.0					
Acetone	370	ug/l	10					
Carbon disulfide	ND	ug/l	5.0					
2-Butanone	ND	ug/l	10.					
Vinyl acetate	ND	ug/l	20.					
4-Methyl-2-pentanone	ND	ug/l	10.					
2-Hexanone	ND	ug/l	10.					
Acrolein	ND	ug/l	8.0					
Acrylonitrile	ND	ug/l	10.					
Surrogate(s)	Recovery		QC Cr	iteria				
Pentafluorobenzene	102	op	80-12	0				
Fluorobenzene	102	90	80-12	0				
4-Bromofluorobenzene	110	o _o o	80-12	0				

Comments: Complete list of References and Glossary of Terms found in Addendum $\ensuremath{\mathtt{I}}$

Laboratory Job Number: L0700711

Parameter		Value 1	Value 2	Units	RPD	RPD Limits
Soli	ds. Total	Suspended fo	or sample(s)	01 (L07007	90-01. t	WG268036-2)
Solids, Total Suspen		ND	ND	mg/1	NC	20
	Cyanide, T		_	(L0701282-01	, WG268	
Cyanide, Total		ND	ND	mg/l	NC	30
	itrogen, A			(L0701095-	-	68660-4)
Nitrogen, Ammonia		10.5	10.8	mg/l	3	
P: Phosphorus, Total	hosphorus,	Total for s	sample(s) 01 0.15	L (L0700976- mg/l	04, WG2	68265-3) 20
nosphorus, rocar		0.10	0.13	mg/ i	O	2.0
Chem Chemical Oxygen Dem		n Demand for 20	sample(s) 22	01 (L070082 mg/l	7-07, WO	G268193-4)
	BOD, 5 d	ay for sampl	le(s) 01 (L0	0700711-01,	WG26772	0-4)
BOD, 5 day		220	200	mg/l	10	35
				02 (L070117		
Oil & Grease, Hem-G	rav	16	17	mg/l	6	18
P Phenolics, Total	henolics,	Total for sa 0.20	ample(s) 02 0.18	(L0700711-0 mg/l	2, WG26	8988-4)
	Total Met	als for samp	ole(s) 01 (1	L0700626-01,	WG2679	80-1)
Silver, Total		ND	ND	mg/l	NC	
	Total Met	als for samp	ole(s) 01 (1	L0700711-01,	WG2686	47-3)
Mercury, Total		ND	ND	mg/l	NC	
SV	OC's by GO	/MS 625 for	sample(s) (01 (L0700629	-01, WG:	267926-4)
Acenaphthene		ND	ND	ug/l	NC	30
Benzidine		ИО	ND	ug/l	ИС	30
1,2,4-Trichlorobenz	ene	ND	ND	ug/l	NC	30
Hexachlorobenzene	_	ND	ND	ug/l	NC	30
Bis(2-chloroethyl)e		ND	ND	ug/l	ИС	30
2-Chloronaphthalene		ND	ND	ug/l	NC	30
1,2~Dichlorobenzene		ND	ND	ug/l	NC	30
1,3-Dichlorobenzene		ND	ND	ug/l	NC	30
1,4-Dichlorobenzene		ND	ND	ug/l	NC	30
3,3'-Dichlorobenzid	ııne	ND	ND	ug/l	NC	30
2,4-Dinitrotoluene		ND	ND	ug/l	NC	30
		ND	ND	ug/l	NC	30
2,6-Dinitrotoluene		ND	ИD	ug/l	NC	30
Azobenzene			315		37.0	20
Azobenzene Fluoranthene	and and an	ИD	ND	ug/l	NC	30
Azobenzene Fluoranthene 4-Chlorophenyl phen		ND ND	ND	ug/l	NC	30
Azobenzene Fluoranthene	l ether	ИD				

Laboratory Job Number: L0700711

Parameter	Value 1	Value 2	Units	RPD	RPD Limits	
SVOC's by	GC/MS 625 for	sample(s)	01 /1.070063	29-01	WG267926-4)	
Hexachlorobutadiene	ND	ND	ug/l	NC	30	
Hexachlorocyclopentadiene	ND	ND	ug/l	NC	30	
Hexachloroethane	ND	ND	ug/l	NC	30	
Isophorone	ND	ND	ug/l	NC	30	
Naphthalene	ND	ND	ug/l	NC	30	
Nitrobenzene	ND	ND	ug/l	NC	30	
NDPA/DPA	ND	ND	ug/l	NC	30	
n-Nitrosodi-n-propylamine	ND	ND	ug/l	NC	30	
Bis(2-ethylhexyl)phthalate	ND	ND	ug/l	NC	30	
Butyl benzyl phthalate	ND	ND	ug/l	NC	30	
Di-n-butylphthalate	ND	ND	ug/l	NC	30	
Di-n-octylphthalate	ND	ND	=			
Diethyl phthalate	ND	ND	ug/l ug/l	NC NC	30 30	
Dimethyl phthalate	ND ND	ND	ug/1 ug/l	NC	30	
Benzo(a)anthracene	ND	ND	ug/l	NC	30	
Benzo (a) pyrene	ND	ND	ug/l	NC	30	
Benzo(b)fluoranthene	ND	ND	ug/1 ug/l	NC	30	
Benzo(k)fluoranthene	ND	ND	ug/1 ug/1	NC	30	
Chrysene	ND	ND	ug/l	NC NC	30	
Acenaphthylene	ND	ND	ug/l	NC	30	
Anthracene	ND	ND	ug/1	NC	30	
Benzo(ghi)perylene	ND	ND	ug/1	NC	30	
Fluorene	ND	ND	ug/1	NC	30	
Phenanthrene	ND	ND	ug/l	NC	30	
Dibenzo(a,h)anthracene	NĐ	ND	ug/1	NC	30	
Indeno(1,2,3-cd)pyrene	ND	ND	ug/l	NC	30	
Pyrene	ND	ND	ug/l	NC	30	
Aniline	ND	ND	ug/l	NC	30	
4-Chloroaniline	ND	ND	ug/l	NC	30	
l-Methylnaphthalene	ND	ND	ug/l	NC	30	
2-Nitroaniline	ND	ND	ug/l	NC	30	
3-Nitroaniline	ND	ND	ug/l	NC	30	
4-Nitroaniline	ND	ИD	ug/l	NC	30	
Dibenzofuran	ND	ND	uq/l	NC	30	
2-Methylnaphthalene	ND	ND	ug/l	NC	30	
n-Nitrosodimethylamine	ND	ND	ug/l	NC	30	
2,4,6-Trichlorophenol	ND	ND	ug/l	NC	30	
p-Chloro-m-cresol	ND	ND	ug/l	NC	30	
2-Chlorophenol	ND	ND	ug/l	NC	30	
2,4-Dichlorophenol	ND	ND	ug/l	NC	30	
2,4-Dimethylphenol	ND	ND	ug/l	NC	30	
2-Nitrophenol	ND	ИD	ug/l	NC	30	
4-Nitrophenol	ND	ND	ug/l	NC	30	
2,4-Dinitrophenol	ND	ND	ug/l	NC	30	
4,6-Dinitro-o-cresol	ND	ND	ug/l	NC	30	
Pentachlorophenol	ND	ND	ug/l	NC	30	
	112	110	4717	NC	30	
Phenol	ND	ND	ug/l	NC	30	

Laboratory Job Number: L0700711

Parameter	Value 1	Value 2	Units	RPD	RPD L	imits
avoci .	GO (MO COE E		01 /7000	.00.07	206757	
	GC/MS 625 for					1)
3-Methylphenol/4-Methylphenol		ND	ug/1	NC	30	
2,4,5-Trichlorophenol	ND	ND	ug/l	NC	30	
2,6-Dichlorophenol Benzoic Acid	ND	ND	ug/1	NC	30	
Benzyl Alcohol	ND	ND	ug/l	NC	30	
Carbazole	ND	ND	ug/1	NC	30	
Carbazore	ND	ND	ug/l	ИС	30	
Surrogate(s)	Reco	overy				QC Criteria
2-Fluorophenol	23.0	34.0	ક			21-120
Phenol-d6	24.0	44.0	સ			10-120
Nitrobenzene-d5	49.0	54.0	9			23-120
2-Fluorobiphenyl	59.0	57.0	96			43-120
2,4,6-Tribromophenol	59.0	69.0	96			10-120
4-Terphenyl-d14	80.0	88.0	96			33-120
PCR/PAG	ticides for sa	umple(e) Ol	/10700711_	.01 MC260	117241	
Delta-BHC	ND ND	ND ND	ug/1	NC	30	
Lindane	ND	ND	ug/l	NC	30	
Alpha-BHC	ND	ND	ug/l	NC	30	
Beta-BHC	ND	ND	ug/l	NC	30	
Heptachlor	ND	ND	ug/l	NC	30	
Aldrin	0.111	0.130	ug/l	16	30	
Heptachlor epoxide	ND	ND	ug/l	NC	30	
Endrin	ND	ND	ug/l	NC	30	
Endrin aldehyde	ND	ND	ug/l	NC	30	
Endrin ketone	ND	ND	ug/l	NC	30	
Dieldrin	ND	ND	ug/l	NC	30	
4,4'-DDE	ND	ND	ug/l	NC	30	
4,4'~DDD	ND	ND	ug/l	NC	30	
4,4'-DDT	ND	ND	ug/l	NC	30	
Endosulfan I	ND	ND .	ug/l	NC	30	
Endosulfan II	ND	ND	ug/l	NC	30	
Endosulfan sulfate	ND	ND	ug/l	NC	30	
Methoxychlor	ND	ND	ug/l	NC	30	
Toxaphene	ND	ND	ug/l	NC	30	
Chlordane	ND	ND	ug/l	NC	30	
cis-Chlordane	ИД	ND	ug/l	NC	30	
trans-Chlordane	ND	ND	ug/l	NC	30	
Aroclor 1016	ND	ND	ug/l	NC	30	
Aroclor 1221	ND	ND	ug/l	NC	30	
Aroclor 1232	ND	ND	ug/l	NC	30	
Aroclor 1242	ND	ND	ug/l	NC	30	
Aroclor 1248	ND	ND	ug/l	NC	30	
Aroclor 1254	ND	ND	ug/l	NC	30	
Aroclor 1260	ND	ND	ug/l	NC	30	

Laboratory Job Number: L0700711

Parameter	Value 1	Value 2	Units	RPD	RPD Li	mits
PCB/Pestic	ides for sa	ample(s) 01	(L0700711-	01, WG269	9173-4)	
Surrogate(s)	Reco	overy				QC Criteria
2,4,5,6-Tetrachloro-m-xylene	54.0	59.0	96			30-150
Decachlorobiphenyl	60.0	62.0	8			30-150

Laboratory Job Number: L0700711

Parameter	% Recovery QC Criteria
Cyanide, To	otal LCS for sample(s) 02 (WG268764-1)
Cyanide, Total	106 90-110
Nitrogen, Amm Nitrogen, Ammonia	monia LCS for sample(s) 01 (WG268660-2) 100
Phosphorus, T Phosphorus, Total	Total LCS for sample(s) 01 (WG268265-2) 101 85-115
Chemical Oxyger Chemical Oxygen Demand	n Demand LCS for sample(s) 01 (WG268193-2) 99
BOD, 5 day	ay LCS for sample(s) 01 (WG267720-2) 89 85-115
Oil & Grease, A Oil & Grease, Hem-Grav	Hem-Grav LCS for sample(s) 02 (WG268751-2) 95 78-114
Phenolics, 1	Total LCS for sample(s) 02 (WG268988-2) 95 82-111
	als LCS for sample(s) 01 (WG267980-4)
Aluminum, Total	100
Antimony, Total	102
Arsenic, Total Beryllium, Total	108
Cadmium, Total	105 107
Chromium, Total	100
Copper, Total	94
Lead, Total	104
Nickel, Total	97
Selenium, Total	109
Silver, Total	97
Thallium, Total	103
Zinc, Total	101
	als LCS for sample(s) 01 (WG268647-1)
Mercury, Total	98
	by GC/MS 624 LCS for sample(s) 02 (WG267920-3)
Methylene chloride	101 10-221
1,1-Dichloroethane	100 59-155
Chloroform	106 51-138
Carbon tetrachloride	98 70-140
1,2-Dichloropropane	95 10-210
Dibromochloromethane 1,1,2-Trichloroethane	95 53-149
	102 52-150 82 10-305
2-Chloroethylvinyl ether Tetrachloroethene	82 10-305 104 64-148

Laboratory Job Number: L0700711

Parameter	% Recovery QC Criteria	
Volatile Organics by GC/MS	624 LCS for sample(s) 02 (WG267920-3)	
Chlorobenzene	108 37-160	
Trichlorofluoromethane	112 17-181	
1,2-Dichloroethane	100 49-155	
1,1,1-Trichloroethane	99 52-162	
Bromodichloromethane	92 35-155	
trans-1,3-Dichloropropene	82 17-183	
cis-1,3-Dichloropropene	87 10-227	
Bromoform	92 45-169	
1,1,2,2-Tetrachloroethane	103 46-157	
Benzene	106 37–151	
Toluene	110 47-150	
Ethylbenzene	120 37-162	
Chloromethane	104 10-273	
Bromomethane	110 10-242	
Vinyl chloride	113 10-251	
Chloroethane	107 107 251	
1,1-Dichloroethene	98 10-234	
trans-1,2-Dichloroethene		
cis-1,2-Dichloroethene		
Trichloroethene		
1,2-Dichlorobenzene		
1,3-Dichlorobenzene		
	110 59-156	
1,4-Dichlorobenzene	114 18-190	
p/m-Xylene	129 40-160	
o-Xylene	123 40-160	
XYLENE (TOTAL)	127 40-160	
Styrene	117 40-160	
Acetone	100 40-160	
Carbon disulfide	97 40-160	
2-Butanone	78 40-160	
Vinyl acetate	112 40-160	
4-Methyl-2-pentanone	76 40-160	
2-Hexanone	68 40-160	
Acrolein	116 40-160	
Acrylonitrile	100 40-160	
Surrogate(s)		
Pentafluorobenzene	98 80-120	
Fluorobenzene	119 80-120	
4-Bromofluorobenzene	105 80-120	
	CS for sample(s) 01 (WG267926-2)	
Acenaphthene	55 46-118	
1,2,4-Trichlorobenzene	42 39-98	
2-Chloronaphthalene	55 40-140	
1,2-Dichlorobenzene	42 40-140	
1,4-Dichlorobenzene	39 36-97	
2,4-Dinitrotoluene	94 24-96	

Laboratory Job Number: L0700711

Parameter	% Recovery	QC Criteria	
SVOC's by GC/MS 625 LCS f	for sample(s) 01	(WG267926-2)	
2,6-Dinitrotoluene	94	40-140	
Fluoranthene	90	40-140	
4-Chlorophenyl phenyl ether	64	40-140	
n-Nitrosodi-n-propylamine	42	41-116	
Butyl benzyl phthalate	96	40-140	
Anthracene	69	40-140	
Pyrene	86	26-127	
Hexachloropropene	26	40-140	
P-Chloro-M-Cresol	62	23-97	
2-Chlorophenol	47	27-123	
2-Nitrophenol	54	30-130	
4-Nitrophenol	41	10-80	
2,4-Dinitrophenol	43	30-130	
Pentachlorophenol	84	9-103	
Phenol	21	12-110	
	2. 1	12 110	
Surrogate(s)			
2-Fluorophenol	31	21-120	
Phenol-d6	32	10-120	
Nitrobenzene-d5	52	23-120	
2-Fluorobiphenyl	52	43-120	
2,4,6-Tribromophenol	82	10-120	
4-Terphenyl-d14	96	33-120	
	30	33 120	
PCB/Pesticides LCS for	sample(s) 01 (WG269173-2)	
Delta-BHC	56	30-150	
Lindane	67	30-150	
Alpha-BHC	64	30-150	
Beta-BHC	72	30-150	
Heptachlor	58	30-150	
Aldrin	46	30-150	
Heptachlor epoxide	68	30-150	
Endrin	86	30-150	
Endrin aldehyde	55	30-150	
Endrin aldehyde Endrin ketone	55 63	30-150 30-150	
		30-150	
Endrin ketone	63	30-150 30-150	
Endrin ketone Dieldrin 4,4'-DDE	63 74 70	30-150 30-150 30-150	
Endrin ketone Dieldrin 4,4'-DDE 4,4'-DDD	63 74 70 86	30-150 30-150 30-150 30-150	
Endrin ketone Dieldrin 4,4'-DDE 4,4'-DDD 4,4'-DDT	63 74 70 86 76	30-150 30-150 30-150 30-150 30-150	
Endrin ketone Dieldrin 4,4'-DDE 4,4'-DDD 4,4'-DDT Endosulfan I	63 74 70 86 76 70	30-150 30-150 30-150 30-150 30-150 30-150	
Endrin ketone Dieldrin 4,4'-DDE 4,4'-DDD 4,4'-DDT Endosulfan I Endosulfan II	63 74 70 86 76 70 80	30-150 30-150 30-150 30-150 30-150 30-150	
Endrin ketone Dieldrin 4,4'-DDE 4,4'-DDD 4,4'-DDT Endosulfan I Endosulfan sulfate	63 74 70 86 76 70 80 62	30-150 30-150 30-150 30-150 30-150 30-150 30-150 30-150	
Endrin ketone Dieldrin 4,4'-DDE 4,4'-DDD 4,4'-DDT Endosulfan I	63 74 70 86 76 70 80	30-150 30-150 30-150 30-150 30-150 30-150	

Laboratory Job Number: L0700711

		% Recovery	QC Criteria
PCB/Pe:	sticides LCS for s	ample(s) 01	(WG269173-2)
Comments (a)			,
Surrogate(s)	2		
2,4,5,6-Tetrachloro-m-x	xàreue	46	30-150
Decachlorobiphenyl		52	30-150
Cyanide, Total	SPIKE for sample(s) 02 (L0700	0829-08, WG268764-3)
Cyanide, Total		126	80-120
Nitrogen, Ammon:	ia SPIKE for sampl	e(s) 01 (L07	'01095-03, WG268660-3)
Nitrogen, Ammonia		94	
Phosphorus, Tota	al SPIKE for sampl	e(s) 01 (I.O7	00976-06, WG268265-4)
Phosphorus, Total	or real real bumpr	97	80-120
Chemical Ovugen De	mand SPIKE for com	nle/e) 01 /T	.0700827-07, WG268193-3)
Chemical Oxygen Demand	mana seine 101 Sam	pre(s) or (r 101	20100021-01, MGZ08133-3)
POD 5 day 0	DIVE for complete	01 (1070070	12 A1 FIGURE 2200 AV
BOD, 5 day	PIKE for sample(s)	96	72-01, WG26/720-3) 50-145
0/1 0	_		
Oil & Grease, Hem-(Grav SPIKE for sam		.0700797-02, WG268751-3)
Oil & Grease, Hem-Grav		83	78-114
Phenolice Tota	1 SDIKE for comple	(a) 02 (1070	10711 02 MC2600D0 21
Phenolics, Total	T STIME TOL SAMPLE	(s) 02 (L070 90	0711-02, WG268988-3) 77-124
·			
Total Metals :	SPIKE for sample(s	1 01 (10700	0.0 0.1 MODOCTORD ON
Alaminam M-4-1			26-01, WG26/98U-2)
		110	26-01, WG26/980-2)
Aluminum, Total Antimony, Total		110 104	20-01, WG20/980-2)
Antimony, Total Arsenic, Total		110 104 110	26-01, WG26/980-2)
Antimony, Total Arsenic, Total Beryllium, Total		110 104 110 106	26-01, WG26/980-2)
Antimony, Total Arsenic, Total Beryllium, Total Cadmium, Total		110 104 110 106 108	26-01, WG26/980-2)
Antimony, Total Arsenic, Total Beryllium, Total Cadmium, Total Chromium, Total		110 104 110 106 108 100	26-01, WG26/980-2)
Antimony, Total Arsenic, Total Beryllium, Total Cadmium, Total Chromium, Total Copper, Total		110 104 110 106 108	26-01, WG26/980-2)
Antimony, Total Arsenic, Total Beryllium, Total Cadmium, Total Chromium, Total Copper, Total Lead, Total		110 104 110 106 108 100 97 107	26-01, WG26/980-2)
Antimony, Total Arsenic, Total Beryllium, Total Cadmium, Total Chromium, Total Copper, Total Lead, Total Nickel, Total		110 104 110 106 108 100 97	26-01, WG26/980-2)
Antimony, Total Arsenic, Total Beryllium, Total Cadmium, Total Chromium, Total Copper, Total Lead, Total Nickel, Total Selenium, Total		110 104 110 106 108 100 97 107	26-01, WG26/980-2)
Antimony, Total Arsenic, Total Beryllium, Total Cadmium, Total Chromium, Total Copper, Total Lead, Total Nickel, Total Selenium, Total Silver, Total		110 104 110 106 108 100 97 107 98	26-01, WG26/980-2)
Antimony, Total Arsenic, Total Beryllium, Total Cadmium, Total Chromium, Total Copper, Total Lead, Total Nickel, Total Selenium, Total Silver, Total		110 104 110 106 108 100 97 107 98	26-01, WG26/980-2)
Antimony, Total Arsenic, Total Beryllium, Total Cadmium, Total Chromium, Total Copper, Total Lead, Total Nickel, Total Selenium, Total		110 104 110 106 108 100 97 107 98 110	26-01, WG26/980-2)
Antimony, Total Arsenic, Total Beryllium, Total Cadmium, Total Chromium, Total Copper, Total Lead, Total Nickel, Total Selenium, Total Silver, Total Thallium, Total	SPIKE for sample(s	110 104 110 106 108 100 97 107 98 110 99 105 104	
Antimony, Total Arsenic, Total Beryllium, Total Cadmium, Total Chromium, Total Copper, Total Lead, Total Nickel, Total Selenium, Total Silver, Total Thallium, Total	SPIKE for sample(s	110 104 110 106 108 100 97 107 98 110 99 105 104	11-01, WG268647-2)
Antimony, Total Arsenic, Total Beryllium, Total Cadmium, Total Chromium, Total Copper, Total Lead, Total Nickel, Total Selenium, Total Silver, Total Thallium, Total Zinc, Total Mercury, Total		110 104 110 106 108 100 97 107 98 110 99 105 104) 01 (L07007	11-01, WG268647-2)
Antimony, Total Arsenic, Total Beryllium, Total Cadmium, Total Chromium, Total Copper, Total Lead, Total Nickel, Total Selenium, Total Silver, Total Thallium, Total Zinc, Total Mercury, Total		110 104 110 106 108 100 97 107 98 110 99 105 104) 01 (L07007 117	11-01, WG268647-2) 700629-01, WG267926-3)
Antimony, Total Arsenic, Total Beryllium, Total Cadmium, Total Chromium, Total Chromium, Total Copper, Total Lead, Total Nickel, Total Selenium, Total Silver, Total Thallium, Total Zinc, Total Mercury, Total SVOC's by GC/MS	625 SPIKE for samp	110 104 110 106 108 100 97 107 98 110 99 105 104) 01 (L07007	11-01, WG268647-2)

Laboratory Job Number: L0700711

Parameter	% Recovery QC Crite	ria
ONOR I - har on the COE OF THE COE		7770 (700 (2)
SVOC'S by GC/MS 625 SPIKE I 1,2-Dichlorobenzene	or sample(s) 01 (L0700629-01, 46 40-140	WG26/926-3)
1,4-Dichlorobenzene	46 46 36-97	
2,4-Dinitrotoluene	83 24-96	
2,6-Dinitrotoluene		
Fluoranthene		
	87 40-140	
4-Chlorophenyl phenyl ether	78 40-140	
n-Nitrosodi-n-propylamine	55 41-116	
Butyl benzyl phthalate	92 40-140	
Anthracene	42 40-140	
Pyrene	78 26-127	
Hexachloropropene	39 40-140	
P-Chloro-M-Cresol	10 23-97	
2-Chlorophenol	39 27-123	
2-Nitrophenol	83 30–130	
4-Nitrophenol	97 10-80	
2,4-Dinitrophenol	110 30-130	
Pentachlorophenol	53 9-103	
Phenol	9 12-110	
Surrogate(s)		
2-Fluorophenol	19 21-120	
Phenol-d6	11 10-120	
Nitrobenzene-d5	60 23-120	
2-Fluorobiphenyl	65 43-120	
2,4,6-Tribromophenol	62 10-120	
4-Terphenyl-d14	88 33–120	
PCB/Pesticides SPIKE for	sample(s) 01 (L0700711-01, WG	269173-3)
Delta-BHC	58 30-150	
Lindane	78 30-150	
Alpha-BHC	72 30-150	
Beta-BHC	74 30-150	
Heptachlor	103 30-150	
Aldrin	71 30-150	
	70 30-150	
Heptachlor epoxide	70 30-150	
Heptachlor epoxide Endrin	85 30-150	
Endrin	85 30-150	
Endrin Endrin aldehyde	85 30-150 49 30-150	
Endrin Endrin aldehyde Endrin ketone	85 30-150 49 30-150 61 30-150	
Endrin Endrin aldehyde Endrin ketone Dieldrin	85 30-150 49 30-150 61 30-150 61 30-150 64 30-150	
Endrin Endrin aldehyde Endrin ketone Dieldrin 4,4'-DDE	85 30-150 49 30-150 61 30-150 61 30-150 64 30-150 74 30-150	
Endrin Endrin aldehyde Endrin ketone Dieldrin 4,4'-DDE 4,4'-DDD	85 30-150 49 30-150 61 30-150 61 30-150 64 30-150 74 30-150 72 30-150	
Endrin Endrin aldehyde Endrin ketone Dieldrin 4,4'-DDE 4,4'-DDD	85 30-150 49 30-150 61 30-150 61 30-150 64 30-150 74 30-150 72 30-150 71 30-150	
Endrin Endrin Endrin aldehyde Endrin ketone Dieldrin 4,4'-DDE 4,4'-DDD 4,4'-DDT Endosulfan I Endosulfan II	85 30-150 49 30-150 61 30-150 61 30-150 64 30-150 74 30-150 72 30-150 71 30-150 66 30-150	
Endrin Endrin Endrin aldehyde Endrin ketone Dieldrin 4,4'-DDE 4,4'-DDD 4,4'-DDT Endosulfan I Endosulfan sulfate	85 30-150 49 30-150 61 30-150 61 30-150 64 30-150 74 30-150 72 30-150 71 30-150 66 30-150 72 30-150	
Endrin Endrin Endrin aldehyde Endrin ketone Dieldrin 4,4'-DDE 4,4'-DDD 4,4'-DDT Endosulfan I Endosulfan II	85 30-150 49 30-150 61 30-150 61 30-150 64 30-150 74 30-150 72 30-150 71 30-150 66 30-150	

Laboratory Job Number: L0700711

Continued

Parameter	% Recovery QC Criteria				
PCB/Pesticides SPIKE for sample	(s) 01 (L0700	711-01, WG269173-3)			
Surrogate(s)					
2,4,5,6-Tetrachloro-m-xylene	57	30-150			
Decachlorobiphenyl	62	30-150			

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PARAMETER	RESULT	UNITS		RDL I	REF	METHOD	DA PREP	TE ANAL	ID
					·····	-			
Blank	Analysis for	r sample(s)	01	(WG26803)	5-1)				
Solids, Total Suspended	_	mg/l		5.0		160.2		0119 14:30	DW
Blank	Analysis for	sample(s)	02	(WG268764	1-2)				
Cyanide, Total	ND	mg/l		0.005	4	335.2	0126 16:30	0130 13:11	DD
	Analysis for	-	01)-1)				
Nitrogen, Ammonia	ND	mg/l		0.075	44	350.1	0125 16:00	0126 10:57	AT
	Analysis for	_	01						
Phosphorus, Total	ND	mg/l		0.01	4	365.2		0122 15:00) HS
	Analysis for	-	01						
Chemical Oxygen Demand	ND	mg/l		20.	44	410.4		0122 10:15	DW.
	Analysis for		01						
BOD, 5 day	ND	mg/l		2.0	4	405.1	0117 07:30	0122 12:10) DW
	Analysis for	_	02						
Oil & Grease, Hem-Grav	ND	mg/l		4.0	74	1664A	0125 13:30	0129 06:45	AT
	Analysis for		02						
Phenolics, Total	ND	mg/l		0.03		420.1		0129 09:00	AT
Blank Total Metals	: Analysis fo	sample(s)	01	(WG267980		200.7			
Aluminum, Total	ND	mg/l		0.10		200.7	0118 17:00	0123 09:28	MG
Antimony, Total	ND	mg/l		0.050		200.7	0118 17:00	0123 09:28	MG
Arsenic, Total	ND	mg/l		0.005		200.7		0123 09:28	
Beryllium, Total	ND	mg/1		0.005		200.7		0123 09:28	
Cadmium, Total	ND	mg/1		0.005		200.7		0123 09:28	
Chromium, Total	ND	mg/1		0.01		200.7		0123 09:28	
Copper, Total Lead, Total	ND	mg/1		0.010		200.7		0123 09:28	
·	ND	mg/1		0.010		200.7		0123 09:28	
Nickel, Total	ND	mg/1		0.025		200.7		0123 09:28	
Selenium, Total	ND	mg/l		0.010		200.7		0123 09:28	
Silver, Total Thallium, Total	ND	mg/l		0.007		200.7		0123 09:28	
Zinc, Total	ND	mg/l		0.020		200.7		0123 09:28	
arme, rocar	ИD	mg/1		0.050	19	200.7	0118 17:00	0123 09:28	MG

Laboratory Job Number: L0700711

PARAMETER	RESULI	UNITS	RDL	REF	METHOD	DA PREP	TE I
Blank A	Analysis for	sample(s)	 ∩1 /MC24	8647-4			
Total Metals	maryord ror	Bampic (B)	01 (1102)	0041 4	!		
Mercury, Total	ND	mg/l	0.00	02 4	245.2	0125 17:00	0126 10:29 D
Blank A	Analysis for	sample(s)	02 (WG26	7920-4	+		
Volatile Organics by GC/N	4S 624			5	624		0117 08:34 M
Methylene chloride	ND	ug/l	5.0				
1,1-Dichloroethane	ND	ug/l	1.5				
Chloroform	ND	ug/l	1.5				
Carbon tetrachloride	ND	ug/l	1.0				
1,2-Dichloropropane	ND	ug/l	3.5				
Dibromochloromethane	ND	ug/l	1.0				
1,1,2-Trichloroethane	ND	ug/l	1.5				
2-Chloroethylvinyl ether	ND	ug/l	10.				
Tetrachloroethene	ND	ug/l	1.5				
Chlorobenzene	ND	ug/l	3.5				
Trichlorofluoromethane	ND	ug/l	5.0				
1,2-Dichloroethane	ND	ug/l	1.5				
1,1,1-Trichloroethane	ND	ug/l	2.0				
Bromodichloromethane	ND	ug/l	1.0				
trans-1,3-Dichloropropene	e ND	ug/l	1.5				
cis-1,3-Dichloropropene	ND	ug/l	1.5				
Bromoform	ND	ug/l	1.0				
1,1,2,2-Tetrachloroethane		ug/l	1.0				
Benzene	ND	ug/l	1.0				
Toluene	ND	ug/l	1.0				
Ethylbenzene	ND	ug/l	1.0				
Chloromethane	ND	ug/l	10.				
Bromomethane	ND	ug/l	5.0				
Vinyl chloride	ND	ug/l	2.0				
Chloroethane	ND	ug/l	2.0				
1,1-Dichloroethene	ИD	ug/l	1.0				
trans-1,2-Dichloroethene	ND	ug/l	1.5				
cis-1,2-Dichloroethene	ND	ug/1	1.0				
Trichloroethene	ND	ug/l	1.0				
1,2-Dichlorobenzene	ND	ug/l	5.0				
1,3-Dichlorobenzene	ND	ug/l	5.0				
1,4-Dichlorobenzene	ND	ug/l	5.0				
p/m-Xylene	ND	ug/l	2.0				
o-xylene	ND	ug/1	1.0				
Xylene (Total)	ND	ug/l	2.0				
Styrene	ND	ug/l	1.0				
Acetone	ND	ug/l	10.				
Carbon disulfide	ND	ug/l	5.0				
2-Butanone	ND	ug/1 ug/1					
Vinyl acetate	ND	*	10.				
		ug/l	20.				
4-Methyl-2-pentanone	ND	ug/l	10.				

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PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE II PREP ANAL
					PREP ANAL
Blank Anal	ysis for sa	mple(s) 0:	2 (WG2679	920-4)	
Volatile Organics by GC/MS 6	24 cont'd			5 624	0117 08:34 M
2-Hexanone	ND	ug/l	10.		
Acrolein	ND	ug/l	8.0		
Acrylonitrile	ND	ug/l	10.		
Methyl tert butyl ether	ND	ug/l	20.		
1,4-Dioxane	ND	ug/l	2000		
Tert-Butyl Alcohol	ND	ug/l	100		
Tertiary-Amyl Methyl Ether	ND	ug/l	20.		
Surrogate(s)	Recovery		QC Cri	iteria	
Pentafluorobenzene	103	g _o	80-120)	
Fluorobenzene	119	olo Olo	80-120)	
4-Bromofluorobenzene	118	90	80-120)	
Blank Anal	ysis for sa	mple(s) 0	1 (WG2679	926-1)	
SVOC's by GC/MS 625				5 625	0118 10:05 0120 12:58 RI
Acenaphthene	ND	ug/l	5.0		
Benzidine	ND	ug/l	50.		
1,2,4-Trichlorobenzene	ND	ug/l	5.0		
Hexachlorobenzene	ND	ug/l	5.0		
Bis(2-chloroethyl)ether	ND	ug/l	5.0		
2-Chloronaphthalene	ND	ug/l	6.0		
1,2-Dichlorobenzene	ND	ug/l	5.0		
1,3-Dichlorobenzene	ND	ug/l	5.0		
1,4-Dichlorobenzene	ND	ug/l	5.0		
3,3'-Dichlorobenzidine	ND	ug/l	50.		
2,4-Dinitrotoluene	ND	ug/l	6.0		
2,6-Dinitrotoluene	ND	ug/l	5.0		
Azobenzene	ND	ug/l	5.0		
Fluoranthene	ND	ug/l	5.0		
4-Chlorophenyl phenyl ether	ИD	ug/l	5.0		
4-Bromophenyl phenyl ether	ND	ug/l	5.0		
Bis(2-chloroisopropyl)ether	ND	ug/l	5.0		
Bis(2-chloroethoxy)methane	ND	ug/l	5.0		
Hexachlorobutadiene	ND	ug/l	10.		
Hexachlorocyclopentadiene	ND	ug/l	30.		
Hexachloroethane	ND	ug/l	5.0		
Isophorone	ND	ug/l	5.0		
Naphthalene	ND	ug/l	5.0		
Nitrobenzene	ND	ug/l	5.0		
NDPA/DPA	ND	ug/l	15.		
n-Nitrosodi-n-propylamine	ND	ug/l	5.0		
Bis(2-ethylhexyl)phthalate	ND	ug/l	5.0		
Butyl benzyl phthalate	ND	ug/l	5.0		
Di-n-butylphthalate	ND	ug/l	5.0		
Di-n-octylphthalate	ND	ug/l	5.0		
Diethyl phthalate	ND	ug/l	5.0		

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PARAMETER	RESULT	UNITS	RDL	REF METHOD	DA		ID
					PREP	ANAL	
Blank Analv	sis for	sample(s) 01	(WG267	926-11			
SVOC's by GC/MS 625 cont'd			(110201	5 625	0118 10:05	0120 12.5	0 57
Dimethyl phthalate	ND	ug/l	5.0	3 023	0110 10.03	0120 12:3	O KL
Benzo(a) anthracene	ND	ug/l	5.0				
Benzo(a)pyrene	ND	ug/l	5.0				
Benzo(b)fluoranthene	ND	ug/1	5.0				
Benzo(k)fluoranthene	ND	ug/l	5.0				
Chrysene	ND	ug/l	5.0				
Acenaphthylene	ND	ug/l	5.0				
Anthracene	ND	ug/l	5.0				
Benzo(ghi)perylene	ND	ug/l	5.0				
Fluorene	ND	ug/l	5.0				
Phenanthrene	ND	ug/1	5.0				
Dibenzo(a,h)anthracene	ND	ug/l	5.0				
Indeno(1,2,3-cd)pyrene	ND	ug/l	7.0				
Pyrene	ND	ug/l	5.0				
Aniline	ND	ug/l	20.				
4-Chloroaniline	ND	ug/l	5.0				
l-Methylnaphthalene	ND	ug/l	5.0				
2-Nitroaniline	ND	ug/1	5.0				
3-Nitroaniline	ND	ug/l	5.0				
4-Nitroaniline	ND	ug/l	7.0				
Dibenzofuran	ND	ug/l	5.0				
2-Methylnaphthalene	ND	ug/l	5.0				
n-Nitrosodimethylamine	ND	ug/l	50.				
2,4,6-Trichlorophenol	ND	ug/l	5.0				
p-Chloro-m-cresol	ND	ug/l	5.0				
2-Chlorophenol	ND	ug/l	6.0				
2,4-Dichlorophenol	ND	ug/l	10.				
2,4-Dimethylphenol	ND	ug/l	10.				
2-Nitrophenol	ND	ug/l	20.				
4-Nitrophenol	ND		10.				
2,4-Dinitrophenol	ND	ug/1	30.				
4,6-Dinitro-o-cresol	ND	ug/l ug/l	20.				
Pentachlorophenol	ND	=					
Phenol	ND	ug/l	10.				
2-Methylphenol	ND ND	ug/1	7.0				
3-Methylphenol/4-Methylphenol		ug/l	6.0				
2,4,5-Trichlorophenol	ND	ug/l	6.0				
2,6-Dichlorophenol	ND	ug/l ug/l	5.0				
Benzoic Acid	ND ND	-	10.				
Benzyl Alcohol	ND ND	ug/l	50.				
Carbazole	ND	ug/l ug/l	10. 5.0				
Surrogate(s)	Recover	v	OC Cr	iteria			
2-Fluorophenol	38.0		21-12				
Phenol-d6	36.0	g _o	10-12				
Nitrobenzene-d5	61.0	96	23-12				

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2-Fluorobiphenyl 53.0 % 43-120 2,4,6-Tribromophenol 75.0 % 10-120 4-Terphenyl-dl4 91.0 % 33-120 Blank Analysis for sample(s) 01 (WG269173-1)		
2-Fluorobiphenyl 53.0 % 43-120 2,4,6-Tribromophenol 75.0 % 10-120 4-Terphenyl-d14 91.0 % 33-120 Blank Analysis for sample(s) 01 (WG269173-1) PCB/Pesticides 5 608 0123 14:05 Delta-BHC ND ug/l 0.020 Lindane ND ug/l 0.020 Alpha-BHC ND ug/l 0.020 Beta-BHC ND ug/l 0.020 Heptachlor ND ug/l 0.020		
2,4,6-Tribromophenol 75.0 % 10-120 4-Terphenyl-d14 91.0 % 33-120 Blank Analysis for sample(s) 01 (WG269173-1) PCB/Pesticides 5 608 0123 14:05 Delta-BHC ND ug/l 0.020 Lindane ND ug/l 0.020 Alpha-BHC ND ug/l 0.020 Beta-BHC ND ug/l 0.020 Heptachlor ND ug/l 0.020	0120 12:58	RL
### Analysis for sample(s) 01 (WG269173~1) ###PCB/Pesticides		
Blank Analysis for sample(s) 01 (WG269173~1) PCB/Pesticides		
PCB/Pesticides 5 608 0123 14:09 Delta-BHC ND ug/l 0.020 Lindane ND ug/l 0.020 Alpha-BHC ND ug/l 0.020 Beta-BHC ND ug/l 0.020 Heptachlor ND ug/l 0.020		
Delta-BHC ND ug/l 0.020 Lindane ND ug/l 0.020 Alpha-BHC ND ug/l 0.020 Beta-BHC ND ug/l 0.020 Heptachlor ND ug/l 0.020		
Lindane ND ug/l 0.020 Alpha-BHC ND ug/l 0.020 Beta-BHC ND ug/l 0.020 Heptachlor ND ug/l 0.020	0130 21:08	AK
Alpha-BHC ND ug/l 0.020 Beta-BHC ND ug/l 0.020 Heptachlor ND ug/l 0.020		
Beta-BHC ND ug/l 0.020 Heptachlor ND ug/l 0.020		
Heptachlor ND ug/1 0.020		
• • • • • • • • • • • • • • • • • • •		
Aldrin ND 1071 0.000		
3 /		
Heptachlor epoxide ND ug/1 0.020		
Endrin ND ug/l 0.040		
Endrin aldehyde ND ug/l 0.040		
Endrin ketone ND ug/l 0.040		
Dieldrin ND ug/l 0.040		
4,4'-DDE ND ug/1 0.040		
4,4'-DDD ND ug/l 0.040		
4,4'-DDT ND ug/1 0.040		
Endosulfan I ND ug/l 0.020		
Endosulfan II ND ug/l 0.040		
Endosulfan sulfate ND ug/l 0.040		
Methoxychlor ND ug/1 0.200		
Toxaphene ND ug/l 0.200		
Chlordane ND ug/1 0.200		
cis-Chlordane ND ug/l 0.020		
trans-Chlordane ND ug/1 0.020		
Aroclor 1016 ND ug/1 0.250		
Aroclor 1221 ND ug/1 0.250		
Aroclor 1232 ND ug/1 0.250		
Aroclor 1242 ND ug/1 0.250		
Aroclor 1248 ND ug/l 0.250		
Aroclor 1254 ND ug/l 0.250		
Aroclor 1260 ND ug/1 0.250		
Surrogate(s) Recovery QC Criteria		
2,4,5,6-Tetrachloro-m-xylene 45.0 % 30-150		
Decachlorobiphenyl 49.0 % 30-150		

ALPHA ANALYTICAL LABORATORIES ADDENDUM I

REFERENCES

- Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020. Revised March 1983.
- 5. Methods for the Organic Chemical Analysis of Municipal and Industrial Wastewater. Appendix A, Part 136, 40 CFR (Code of Federal Regulations).
- 19. Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.
- 44. Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.
- 74. Method 1664, Revision A: N-Hexane Extractable Material (HEM; Oil & Grease) and Silica Gel Treated N-Hexane Extractable Material (SGT-HEM; Non-polar Material) by Extraction and Gravimetry, EPA-821-R-98-002, February 1999.

GLOSSARY OF TERMS AND SYMBOLS

REF Reference number in which test method may be found.

METHOD Method number by which analysis was performed.

ID Initials of the analyst.

ND Not detected in comparison to the reported detection limit.

NI Not Ignitable.

ug/cart Micrograms per Cartridge.

LIMITATION OF LIABILITIES

Alpha Analytical, Inc. performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical, Inc., shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical, Inc. be held liable for any incidental consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical, Inc.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding times and splitting of samples in the field.

Continue Continue	Project Information	Date Rec'd in Lab: 1 (\(\(\) \(
Project Vary Proj	Project Name: Averther Althouse I. WAT Haus Felce Max: Project Location: Solout fall WAT Haus Felce Max: Project Location: Solout fall SFOVEST ST. ALPHA Quote #: ALPHA Q	
House Project (Location Project (Locatio	Project Location: Solouthal	☐ EMAIL ☐ Same as Client info
Maa. S Elec. War Project #: Steek Envasive Steek	S Fo VC&ス S 子	□ ADEx □ Add'i Deliverables
Project Manager Project Ma	S Fo VCST ST, Project Manager: Rethal Lewson/recomposition	Regulatory Requirements/Report Limits
Trun-Around Time	ALPHA Quote #: 229-7/77 Turn-Around Time Date Due: Date Due: Date Due: Date Due: Date Due: Date Due: Date Due: Date Due: Date Time: Date Due: Date Due	
1	Design Turn Around Time Dyes No	MAMCP PRESUMPTIVE CERTAINTY CTREASONABLE CONFIDENCE PRO
Description	Specific Requirements/Comments/Detection Limits: A & C & O or free To Alpha Remposition Limits: A & C & O or free To Alpha Remposition Limits: A & C & O or free To Alpha Remposition Sample	88
Date Due; 30 Time; 30	Specific Requirements/Comments/Detection Limits: 4 & C Outing Collection Limits: 4 & C Outing Collection Limits: 1 & C Outing Collection Limits: 2 & C Outing Collection Limits: 3 & C Outing Collection Limits: 4 & C Outing Collection Limits: 5 & C Outi	
## Sample Date Container Sample Sample	## Specific Requirements/Comments/Detection Limits: (4 % O vring collection Limits: (4 % O vring collection Limits and Franchist and Franchist and Franchist and Franchists and Franchis	501
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	Transfer to AlphA Temp 40 F Reference to the collection Sample Sample Samp	Sold Sold Sold Sold Sold Sold Sold Sold
Sample iD Collection Sample Samplers A 1-16-7 6830 E KL V E + F 1-16-7 6830 E KL V C + 14 1-16-7 6830 E KL V E + F 1-16-7 6830 E KL M + N 1-16-7 6830 E KL L 1-16-7 6830 E KL M + N 1-16-7 6830 E KL Container Type P P P P R R R DaterTime C T RCP? CT RCP? Sample Samplers Matrix A V N / N I-16-7 6830 E KL V C + 14 I-16-7 6830 E KL V N + N N I-16-7 6830 E KL C + 14 I-16-7 6830 E KL N + N N I-16-7 6830 E KL C + 14 I-16-7 6830 E KL C + 14 I-16-7 6830 E KL C + 14 I-16-7 6830 E KL N + N N I-16-7 6830 E KL C + 14 I-16-7 6830 E KL C + 14 I-16-7 6830 E KL C + 14 I-16-7 6830 E KL N + N N I-16-7 6830 E KL C + 14 I-16-7 6830 E KL N + N N I-16-7 6830 E KL N - N N I-16-7 6830 E KL N N + N N I-16-7 6830 E KL N N N N N N N + N N I-16-7 6830 E KL N N N N N N N N N N N N N N N N N N	Sample Date Time Sample Sampl	TINKS SENOOT
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E + F	C + 1+ 1-16-7 0830 E 1-16-7 0830 E 1 1	> 7
E + F- 1-16-7 6830 E KL V V	E + F 1-16-7 6830 E 1 1-16-7 0830 E 1 1 1-16-7 0830 E 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	>>0
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(5 + 1+ 1-16-7 0530 E KL	G + 1+ 1-16-7 0830 E 1 X + 3	Composi
T + 3	7 +3 1-16-7 0830 E 1 L 1-16-7 0830 E 1	(0 m DOS)
K	1-4-7 0830 E	
N + N	6830 P	V (G. Mal)
ESTIONS ABOVE! Container Type P P P P P P P P P P P P P P P P P P P		(w 5
ESTIONS ABOVE! Container Type P<	+ N 1-11-7 0830 E	
OJECT Relinquished By: Date/Time Received By: Date/Time Received By: Date/Time Received By: Date/Time	Container Type P P P P	Please print
CT RCP? Kill Sensor 11:00 File of 11:00 File of 11:00	Preservative A C A D	C A D H H H E D 8
	Keinquished By: Date/Time Received	By: Date/Time

Alpha Analytical Labs Sample Delivery Group Form

Laboratory Job No.	L0700711	SDG Reviewer	LP.
Client:	Po Hm	Date/Time:	1.14.07 1000
Preliminary Revie	W		
1. Samples Delivere	ed via:	2. Chain of Custo	ody: 3. Custody Seal:
Alpha Courier Client	Express Mail Other	Present Absent	☐ Absent ☐ Present/Intact
3. All Containers Acc	counted for:		Present/Broken
Yes	No		
4. Samples received	: :		
Intact	Extra:		
Broken	Sample IDs :		
Leaking	Sample IDs :		
5. Temperature Blan	ık:		
Present	Temperature (in Celsius):	2 - 6 Celsius degr	
Absent	Is the ice in blue ice) present?	☑ Yes □ No *	Cooler Temp: 4 C
Secondary Review	N		
1. Do the sample(s)	labels and Chain of Custody ag	ree?	
Ves	No *		
2. Are the samples	in appropriate containers?		
Yes			
3. Are the samples			
Yes A Are the samples	□ No * Initial pH= ∠7 within holding times?	7 >Noreserved In-Hou	se w/
Yes	_		
		TOTAL CONTROL OF THE PARTY OF T	The state of the s

* Contact client and attach the phone log

Form No.: 01-02

ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive

Westborough, Massachusetts 01581-1019 (508) 898-9220 www.alphalab.com

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

CERTIFICATE OF ANALYSIS

Client: Rohm & Haas

Laboratory Job Number: L0718741

Address: 455 Forest Street

Date Received: 18-DEC-2007

Marlboro, MA 01752

Date Reported: 21-DEC-2007

Attn:

Mr. Keith LeMaire

Delivery Method: Client

Project Number:

Site: EBI-ROHM & HAAS

ALPHA SAMPLE NUMBER CLIENT IDENTIFICATION SAMPLE LOCATION

L0718741-01

A,B COMP

COI

L0718741-02

C, D, E&F&G, GRAB

CO1 MAINTENANCE
CO1 MAINTENANCE

Authorized by:

Technical Representative

12210717:37 Page 1 of 18

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

ALPHA ANALYTICAL LABORATORIES NARRATIVE REPORT

Laboratory Job Number: L0718741

The samples were received in accordance with the chain of custody and no significant deviations were encountered during preparation or analysis unless otherwise noted below.

Volatile Organics

L0718741-02 required re-analysis on a 5x dilution in order to quantitate the sample within the range of the calibration. The result is reported as a greater than value for the compound that exceeded the calibration on the initial analysis. The re-analysis was performed only for the compound which exceeded the range of the calibration.

Semivolatile Organics

L0718741-02 was re-analyzed on a 10x dilution due to non-target compounds above the calibration range on the original analysis. The results of the re-analysis are reported.

The WG306314-4 MS/MSD % recoveries for Pentachlorophenol, and the MS % recovery for 4-Nitrophenol, are above method acceptance criteria.

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number: L0718741-01

Date Collected: 18-DEC-2007 08:30

A,B COMP

Date Received: 18-DEC-2007

Sample Matrix:

WATER

Date Reported : 21-DEC-2007

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 2-Plastic

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE	ID
					PREP ANAL	
Solids, Total Suspended	12	mg/l	5.0	30 2540D	1219 15:	I5 DW
Total Metals				19 200.7		
Antimony, Total	ND	mg/l	0.050	19 200.7	1220 17:00 1221 16:	ll AI
Arsenic, Total	ND	mg/l	0.005	19 200.7	1220 17:00 1221 16:	11 AI
Beryllium, Total	ND	mg/l	0.005	19 200.7	1220 17:00 1221 16:	ll AI
Cadmium, Total	ND	mg/l	0.005	19 200.7	1220 17:00 1221 16:	11 AI
Chromium, Total	ND	mg/1	0.01	19 200.7	1220 17:00 1221 16:	II AI
Mercury, Total	ND	mg/l	0.0002	3 245.1	1219 15:00 1220 13:	17 RC
Selenium, Total	ND	mg/l	0.010	19 200.7	1220 17:00 1221 16:	11 AI
Silver, Total	ND	mg/l	0.007	19 200.7	1220 17:00 1221 16:	11 AI
Thallium, Total	ND	mg/l	0.020	19 200.7	1220 17:00 1221 16:	11 AI
Zinc, Total	ND	mg/l	0.050	19 200.7	1220 17:00 1221 16:	II AI

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number: L0718741-02

Date Collected: 18-DEC-2007 08:30

: L0/18/41-U2 C,D,E&F&G, GRAB

Date Received: 18-DEC-2007

Sample Matrix:

WATER

Date Reported: 21-DEC-2007

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 2-Amber, 1-Plastic, 2-Vial

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DA	TE	ID
					PREP	ANAL	
Cyanide, Total	0.039	mg/l	0.005	30 4500CN-CE	1218 16:30	1219 18:35	5 DĐ
Volatile Organics by GC/MS	3260			1 8260B		1220 17:56	5 PD
Methylene chloride	ND	ug/l	5.0				
1,1-Dichloroethane	ND	ug/l	0.75				
Chloroform	ND	ug/l	0.75				
Carbon tetrachloride	ND	ug/l	0.50				
1,2-Dichloropropane	ND	ug/l	1.8				
Dibromochloromethane	ND	ug/l	0.50				
1,1,2-Trichloroethane	ND	ug/l	0.75				
Tetrachloroethene	ND	ug/l	0.50				
Chlorobenzene	ND	ug/l	0.50				
Trichlorofluoromethane	ИD	ug/l	2.5				
1,2-Dichloroethane	ND	ug/l	0.50				
1,1,1-Trichloroethane	ND	ug/l	0.50				
Bromodichloromethane	ND	ug/l	0.50				
trans-1,3-Dichloropropene	ND	ug/l	0.50				
cis-1,3-Dichloropropene	ND	ug/l	0.50				
1,1-Dichloropropene	ND	ug/l	2.5				
Bromoform	ND	ug/l	2.0				
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50				
Benzene	ND	ug/l	0.50				
Toluene	ND	ug/l	0.75				
Ethylbenzene	ND	ug/l	0.50				
Chloromethane	ND	ug/l	2.5				
Bromomethane	ND	ug/l	1.0				
Vinyl chloride	ND	ug/l	1.0				
Chloroethane	ND	ug/l	1.0				
1,1-Dichloroethene	ND	ug/l	0.50				
trans-1,2-Dichloroethene	ИD	ug/1	0.75				
Trichloroethene	ND	ug/1	0.50				
1,2-Dichlorobenzene	ND	ug/l	2.5				
1,3-Dichlorobenzene	ND	ug/l	2.5				
1,4-Dichlorobenzene	ND	ug/l	2.5				
Methyl tert butyl ether	ND	ug/l	1.0				
p/m-Xylene	ND	ug/l	1.0				
o-Xylene	ND	ug/l	1.0				
cis-1,2-Dichloroethene	ND	ug/l	0.50				
Dibromomethane	ND	ug/l	5.0				

Laboratory Sample Number: L0718741-02

C,D,E&F&G, GRAB

PARAMETER	RESULT	UNITS	\mathtt{RDL}	REF METHOD	DATE	
					PREP A	LAN
olatile Organics by GC/MS 82	60 contid			1 8260в	1220	17:56 PD
volatile organics by GC/MS 02 1,4-Dichlorobutane	ND	ug/l	5.0	1 62605	1220	11.30 15
1,2,3-Trichloropropane	ND	ug/1 ug/1	5.0			
Styrene	ND	ug/l	1.0			
Dichlorodifluoromethane	ND	ug/l	5.0			
Acetone	>100	ug/l	5			
Carbon disulfide	ND	ug/l	5.0			
2-Butanone	ND	ug/l	5.0			
Vinyl acetate	ND	ug/l	5.0			
4-Methyl-2-pentanone	ND	ug/l	5.0			
2-Hexanone	ND	ug/1	5.0			
Ethyl methacrylate	ND	ug/l	5.0			
Acrylonitrile	ND	ug/l	5.0			
Bromochloromethane	ND	ug/l	2.5			
Tetrahydrofuran	ND	ug/l	10.			
2,2-Dichloropropane	ND	ug/l	2.5			
1,2-Dibromoethane	ND ND	ug/l	2.0			
1,3-Dichloropropane	ND	ug/l	2.5			
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50			
Bromobenzene	ND	ug/l	2.5			
	ND	ug/1	0.50			
n-Butylbenzene	ND	ug/l	0.50			
sec-Butylbenzene	ND	ug/l	2.5			
tert-Butylbenzene o-Chlorotoluene	ND	ug/1	2.5			
	ND	ug/l	2.5			
p-Chlorotoluene	ND ND	ug/1 ug/1	2.5			
1,2-Dibromo-3-chloropropane	ND	ug/1 ug/1	0.60			
Hexachlorobutadiene	ND	ug/l	0.50			
Isopropylbenzene	ND	ug/l	0.50			
p-Isopropyltoluene	ND	-	2.5			
Naphthalene		ug/l ug/l	0.50			
n-Propylbenzene	ND		2.5			
1,2,3-Trichlorobenzene	ND	ug/l	2.5			
1,2,4-Trichlorobenzene	ND	ug/l	2.5			
1,3,5-Trimethylbenzene	ND	ug/l	2.5			
1,2,4-Trimethylbenzene	ND	ug/l	2.5			
trans-1,4-Dichloro-2-butene	ND	ug/l				
Ethyl ether	ND	ug/l	2.5			
Surrogate(s)	Recovery		QC Cr	iteria		
1,2-Dichloroethane-d4	98.0	p o	70-13			
Toluene-d8	100	ojo O	70-13			
4-Bromofluorobenzene	100	%	70-13	0		
Dibromofluoromethane	100	95	70-13	0		
Volatile Organics by GC/MS 8	260			1 82608	122	1 11:26 PD
Acetone	270	ug/l	25			
Surrogate(s)	Recovery		QC Cr	riteria		
1,2-Dichloroethane-d4	96.0	્	70-13			
Toluene-d8	101	Q.	70-13			

Laboratory Sample Number: L0718741-02

C, D, E&F&G, GRAB

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DA PREP	TE ANAL	ID
					<u>.</u>	PREP	ANAL	
Volatile Organics by GC/MS 8	260 cont'd			1	8260B		1221 11:2	26 PD
4-Bromofluorobenzene	100	o _l o	70-130					
Dibromofluoromethane	94.0	9	70-130					
Semivolatile Organics by EPA	8270C			1	8270C	1218 17:00	1220 16:5	8 PS
Acenaphthene	ND	ug/l	48.					
Benzidine	ND	ug/l	480					
1,2,4-Trichlorobenzene	ND	ug/l	48.					
Hexachlorobenzene	ND	ug/l	48.					
Bis(2-chloroethyl)ether	ND	ug/l	48.					
2-Chloronaphthalene	ND	ug/l	58.					
1,2-Dichlorobenzene	ИD	ug/l	48.					
1,3-Dichlorobenzene	ND	ug/l	48.					
1,4-Dichlorobenzene	ND	ug/l	48.					
3,3'-Dichlorobenzidine	ND	ug/l	480					
2,4-Dinitrotoluene	ND	ug/l	58.					
2,6-Dinitrotoluene	ND	ug/l	48.					
Azobenzene	ND	ug/l	48.					
Fluoranthene	ND	ug/l	48.					
4-Chlorophenyl phenyl ether	ND	ug/l	48.					
4-Bromophenyl phenyl ether	ND	ug/l	48.					
Bis(2-chloroisopropyl)ether	ND	ug/l	48.					
Bis(2-chloroethoxy)methane	ND	ug/l	48.					
Hexachlorobutadiene	ND	ug/l	97.					
Hexachlorocyclopentadiene	ND	ug/l	290					
Hexachloroethane	ND	ug/l	48.					
Isophorone	ND	ug/l	48.					
Naphthalene	ND	ug/l	48.					
Nitrobenzene	ND	ug/l	48.					
NitrosoDiPhenylAmine(NDPA)/I	OPA ND	ug/l	140					
Bis(2-Ethylhexyl)phthalate	ND	ug/l	48.					
Butyl benzyl phthalate	ND	ug/l	48.					
Di-n-butylphthalate	ND	ug/l	48.					
Di-n-octylphthalate	ND	ug/l	48.					
Diethyl phthalate	ND	ug/l	48.					
Dimethyl phthalate	ND	ug/l	48.					
Benzo(a)anthracene	ND	ug/l	48.					
Benzo (a) pyrene	ND	ug/l	48.					
Benzo (b) fluoranthene	ND	ug/l	48.					
Benzo(k) fluoranthene	ND	ug/l	48.					
Chrysene	ND	ug/l	48.					
Acenaphthylene	ND	ug/l	48.					
Anthracene	ND	ug/l	48.					
Benzo(ghi)perylene	ND	ug/1	48.					
Fluorene	ND	ug/l	48.					
Phenanthrene	ND	ug/l	48.					
Dibenzo(a,h)anthracene	ND	ug/1 ug/l	48.					
	ND	ug/1 ug/l	68.					
Indeno(1,2,3-cd)Pyrene	ND ND	ug/1 ug/l	48.					
Pyrene								
Aniline	ND	ug/l	190					

Laboratory Sample Number: L0718741-02

C, D, E&F&G, GRAB

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DA' PREP	TE ANAL	ID
Semivolatile Organics by EPA	9270C con	+ 1.d			8270C	12)8 17:00	1220 16:	:58 PS
4-Chloroaniline	ND	ug/l	48.	1	02700	1230 11.00	1220 10.	.50 25
	ND	ug/l	48.					
l-Methylnaphthalene 2-Nitroaniline	ND	ug/1	48.					
Z-Nitroamiline 3-Nitroaniline	ND	ug/l	48.					
4-Nitroaniline	ND	ug/l	68.					
4-NICroaniiine Dibenzofuran	ND	ug/l	48.					
2-Methylnaphthalene	ND	ug/l	48.					
n-Nitrosodimethylamine	ND	ug/l	480					
2,4,6-Trichlorophenol	ND	ug/l	48.					
P-Chloro-M-Cresol	ND ND	ug/l	48.					
2-Chlorophenol	ND	ug/l	58.					
2,4-Dichlorophenol	ND	ug/l	97.					
2,4-Dimethylphenol	ND	ug/l	97.					
2-Nitrophenol	ND	ug/1	190					
4-Nitrophenol	ND	ug/1	97.					
2,4-Dinitrophenol	ND	ug/l	290					
4,6-Dinitro-o-cresol	ND	ug/1	190					
Pentachlorophenol	ND	ug/l	97.					
Phenol	ND	ug/l	68.					
2-Methylphenol	ND	ug/l	58.					
3-Methylphenol/4-Methylphenol		ug/l	58.					
2,4,5-Trichlorophenol	ND	ug/l	48.					
Benzoic Acid	ND	ug/1	480					
Benzyl Alcohol	ND	ug/l	97.					
Carbazole	ND	ug/l	48.					
Pyridine	ND	ug/l	480					
Surrogate(s)	Recovery	<i>;</i>	QC Cr	iteri	.a			
2-Fluorophenol	50.0	ક	21-12	0				
Phenol-d6	42.0	용	10-12	0				
Nitrobenzene-d5	82.0	용	23-12	0				
2-Fluorobiphenyl	90.0	%	43-12	0				
2,4,6-Tribromophenol	79.0	엉	10-12	0				
4-Terphenyl-d14	94.0	<u>0</u> 0	33-12	0				

Laboratory Job Number: L0718741

Parameter	Value 1	Value 2	Units	RPD	RPD Limits
Solids, Tota	l Suspended i	for sample	(s) 01 (L07187	75-01,	WG306324-2)
Solids, Total Suspended	44	54	mg/l	20	32
Cyanide,	Total for sa	emple(s) 02	2 (L0718628-02	, WG30	06245-4)
Cyanide, Total	ND	ND	mg/l	NC	
Total M	etals for sa	mple(s) 01	(L0718262-01,	WG306	5562-1)
Antimony, Total	ND	ND	mg/l	NC	
Chromium, Total	ND	ND	mg/l	NC	
Silver, Total	ND	ND	mg/l	NC	
Zinc, Total	0.964	0.940	mg/l	3	
Total M	etals for sa	mple(s) 01	(L0718288-01,	WG306	5411-3)
Mercury, Total	ND	ND	mg/l	ИС	

Laboratory Job Number: L0718741

Parameter	% Recovery	QC Criteria	
	7. (/WC20624E 1)	
Cyanide, Total LC: Cyanide, Total	S for sample(s) 02 106	(MG200242-1)	
cyanitac, iotai			
Total Metals LCS	for sample(s) 01 (V	WG306562-4)	
Antimony, Total	102		
Arsenic, Total	110		
Beryllium, Total	102		
Cadmium, Total	108		
Chromium, Total	100		
Selenium, Total	115		
Silver, Total	101		
Thallium, Total	96		
Zinc, Total	100		
Total Metals LCS	for sample(s) 01 (WG306411-1)	
Mercury, Total	112		
Volatile Organics by GC/MS	8260 LCS for sampl	e(s) 02 (WG306184-11)	
Chlorobenzene	89	75-130	
Benzene	93	76-127	
Toluene	90	76-125	
1,1-Dichloroethene	98	61-145	
Trichloroethene	87	71-120	
Surrogate(s)			
1,2-Dichloroethane-d4	100	70-130	
Toluene-d8	100	70-130	
4-Bromofluorobenzene	97	70-130	
Dibromofluoromethane	101	70-130	
Volatile Organics by GC/MS	8260 LCS for sampl	.e(s) 02 (WG306184-9)	
Chlorobenzene	90	75-130	
Benzene	92	76-127	
Toluene	87	76-125	
1,1-Dichloroethene	89	61-145	
Trichloroethene	85	71-120	
Surrogate(s)			
1,2-Dichloroethane-d4	99	70-130	
Toluene-d8	98	70-130	
4-Bromofluorobenzene	97	70-130	
Dibromofluoromethane	104	70-130	
Semivolatile Organics by EF	PA 8270C LCS for sam	mple(s) 02 (WG306314-2)	
Acenaphthene	80	46-118	
1,2,4-Trichlorobenzene	60	39-98	
2-Chloronaphthalene	72	40-140	
1,2-Dichlorobenzene	51	40-140	
1,4-Dichlorobenzene	48	36-97	

Laboratory Job Number: L0718741

Pluoranthene	Parameter	% Recovery	QC Criteria	
2,4-Dinitrotoluene 96 24-96 2,6-Dinitrotoluene 91 40-140 Fluoranthene 99 40-140 4-Chlorophenyl phenyl ether 84 40-140 n-Nitrosodi-n-propylamine 59 41-116 Butyl benzyl phthalate 99 40-140 Anthracene 76 40-140 Pyrene 97 26-127 P-Chloro-M-Cresol 74 23-97 2-Chlorophenol 54 27-123 2-Nitrophenol 62 30-130 4-Nitrophenol 39 10-80 2,4-Dinitrophenol 81 9-103 Phenol 81 9-103 Phenol 81 9-103 Phenol 81 9-103 Phenol 82 43-120 2-Fluorophenol 35 21-120 Phenol-66 30 10-120 Nitrobenzene-d5 66 23-120 2-Fluoroblehonyl 82 43-120 2-J.4,6-Tribrowophenol 90 10-120 4-Terphenyl-d14 105 33-120 Cyanide, Total SPIKE for sample(s) 02 (L0718741-02, WG306562-2) Antimony, Total Arsenic, Total 114 Beryllium, Total 92 Arsenic, Total 94 Silver, Total 88 Total Metals SPIKE for sample(s) 01 (L0718288-01, WG306411-2)	Semivolatile Organics by EPA	8270C LCS for samp	le(s) 02 (WG306314-2)	
2,6-Dinitrotoluene				
## A-Chlorophenyl phenyl ether	2,6-Dinitrotoluene	91	40-140	
## Annitrosodi	Fluoranthene	99	40-140	
No.	4-Chlorophenyl phenyl ether	84	40-140	
Butyl benzyl phthalate		59	41-116	
Anthracene 76 40-140 Pyrene 97 26-127 P-Chloro-M-Cresol 74 23-97 2-Chlorophenol 54 27-123 2-Nitrophenol 62 30-130 4-Nitrophenol 39 10-80 2,4-Dinitrophenol 81 9-103 Phenol 24 12-110 Surrogate(s) 2-Fluorophenol 35 21-120 Phenol 35 21-120 Phenol 30 10-120 Nitrobenzene-d5 66 23-120 2-Fluorophenyl 82 43-120 2-fluorobiphenyl 82 43-120 2-fluorophenyl 80 10-120 Nitrobenzene-d5 66 23-120 2-fluorophenol 90 10-120 4-Terphenyl-d14 105 33-120 Cyanide, Total SPIKE for sample(s) 02 (L0718741-02, WG306245-3) Cyanide, Total 114 Beryllium, Total 92 Arsenic, Total 114 Beryllium, Total 92 Chromium, Total 92 Chromium, Total 92 Selenium, Total 88 Total Metals SPIKE for sample(s) 01 (L0718282-01, WG306411-2) Total Metals SPIKE for sample(s) 03 (L0718288-01, WG306411-2)		99	40-140	
P-Chloro-M-Cresol 74 23-97 2-Chlorophenol 54 27-123 2-Nitrophenol 62 30-130 4-Nitrophenol 39 10-80 2,4-Dinitrophenol 81 9-103 Pentachlorophenol 81 9-103 Pentachlorophenol 81 9-103 Surrogate(s) 2-Fluorophenol 35 21-120 Phenol 35 21-120 Phenol 36 23-120 2-Fluorophenol 82 43-120 2-Fluorobiphenyl 82 43-120 2-Fluorobiphenyl 82 43-120 2-Fluorobiphenyl 80 100-120 A-Terphenyl-d14 105 33-120 Cyanide, Total SPIKE for sample(s) 02 (L0718741-02, WG306245-3) Cyanide, Total SPIKE for sample(s) 01 (L0718262-01, WG306562-2) Antimony, Total 88 Total Metals SPIKE for sample(s) 01 (L0718262-01, WG306562-2) Antimony, Total 92 Arsenic, Total 114 Beryllium, Total 92 Chromium, Total 92 Selenium, Total 94 Silver, Total 88 Total Metals SPIKE for sample(s) 01 (L0718268-01, WG306411-2)	Anthracene	76	40-140	
P-Chloro-M-Cresol 74 23-97 2-Chlorophenol 54 27-123 2-Nitrophenol 62 30-130 4-Nitrophenol 39 10-80 2,4-Dinitrophenol 81 9-103 Phenol 24 12-110 Surrogate(s) 24 12-110 Surrogate(s) 25 21-120 Phenol 30 10-120 Phenol 30 10-120 Phenol 82 43-120 2,4,6-Tribromophenol 90 10-120 4-Terphenyl-d14 105 33-120 Cyanide, Total SPIKE for sample(s) 02 (L0718741-02, WG306245-3) Cyanide, Total 92 Arsenic, Total 114 Beryllium, Total 92 Chromium, Total 92 Chromium, Total 94 Silver, Total 88 Total Metals SPIKE for sample(s) 01 (L0718262-01, WG306562-2) Selenium, Total 94 Silver, Total 88 Total Metals SPIKE for sample(s) 02 (L0718741-02, WG306562-2) Total Metals 94 Silver, Total 88 Total Metals 94 Silver, Total 88 Total Metals SPIKE for sample(s) 01 (L0718268-01, WG306411-2)		97	26-127	
2-Chlorophenol 54 27-123 2-Nitrophenol 62 30-130 4-Nitrophenol 39 10-80 2,4-Dinitrophenol 58 30-130 Pentachlorophenol 81 9-103 Phenol 24 12-110 Surrogate(s) 2-Fluorophenol 35 21-120 Phenol 35 21-120 Phenol-d6 30 10-120 Nitrobenzene-d5 66 23-120 2-Fluorobiphenyl 82 43-120 2,4,6-Tribromophenol 90 10-120 4-Terphenyl-d14 105 33-120 Cyanide, Total SPIKE for sample(s) 02 (L0718741-02, WG306562-2) Antimony, Total 88 Total Metals SPIKE for sample(s) 01 (L0718262-01, WG306562-2) Antimony, Total 114 Beryllium, Total 92 Chromium, Total 92 Chromium, Total 94 Silver, Total 88 Total Metals SPIKE for sample(s) 01 (L0718288-01, WG306411-2)	-	74	23-97	
2-Nitrophenol 62 30-130 4-Nitrophenol 39 10-80 2,4-Dinitrophenol 58 30-130 Pentachlorophenol 81 9-103 Phenol 24 12-110 Surrogate(s) 2-Fluorophenol 35 21-120 Phenol 30 10-120 Nitrobenzene-d5 66 23-120 2-Fluorobiphenyl 82 43-120 2,4,6-Tribromophenol 90 10-120 4-Terphenyl-d14 105 33-120 Cyanide, Total SPIKE for sample(s) 02 (L0718741-02, WG306245-3) Cyanide, Total Metals SPIKE for sample(s) 01 (L0718262-01, WG306562-2) Antimony, Total 82 114 Beryllium, Total 100 Cadmium, Total 120 Chromium, Total 92 Chromium, Total 92 Chromium, Total 92 Chromium, Total 94 Silver, Total 88 Total Metals SPIKE for sample(s) 01 (L0718268-01, WG306411-2)		54	27-123	
4-Nitrophenol 39 10-80 2,4-Dinitrophenol 58 30-130 Pentachlorophenol 81 9-103 Phenol 24 12-110 Surrogate (s) 2-Fluorophenol 35 21-120 Phenol-d6 30 10-120 Nitrobenzene-d5 66 23-120 2-Fluorobiphenyl 82 43-120 2,4,6-Tribromophenol 90 10-120 4-Terphenyl-d14 105 33-120 Cyanide, Total SPIKE for sample(s) 02 (L0718741-02, WG306245-3) Cyanide, Total Metals SPIKE for sample(s) 01 (L0718262-01, WG306562-2) Antimony, Total 89 Arsenic, Total 110 Cadmium, Total 92 Chromium, Total 92 Chromium, Total 94 Silver, Total 88 Total Metals SPIKE for sample(s) 01 (L0718288-01, WG306411-2)	•	62	30-130	
2,4-Dinitrophenol 58 30-130 Pentachlorophenol 81 9-103 Phenol 24 12-110 Surrogate(s) 2-Fluorophenol 35 21-120 Phenol-d6 30 10-120 Nitrobenzene-d5 66 23-120 2-Fluorobiphenyl 82 43-120 2,4,6-Tribromophenol 90 10-120 4-Terphenyl-d14 105 33-120 Cyanide, Total SPIKE for sample(s) 02 (L0718741-02, WG306245-3) Cyanide, Total SPIKE for sample(s) 01 (L0718262-01, WG306562-2) Antimony, Total 92 Arsenic, Total 110 Cadmium, Total 120 Selenium, Total 94 Silver, Total 88 Thallium, Total 94 Silver, Total 109 Zinc, Total 109 Zinc, Total Metals SPIKE for sample(s) 01 (L0718288-01, WG306411-2)	*			
Pentachlorophenol 81 9-103 Phenol 24 12-110 Surrogate(s) 2-Fluorophenol 35 21-120 Phenol-d6 30 10-120 Nitrobenzene-d5 66 23-120 2-Fluorobiphenyl 82 43-120 2,4,6-Tribromophenol 90 10-120 4-Terphenyl-d14 105 33-120 Cyanide, Total SPIKE for sample(s) 02 (L0718741-02, WG306245-3) Cyanide, Total Metals SPIKE for sample(s) 01 (L0718262-01, WG306562-2) Antimony, Total 88 Total Metals SPIKE for sample(s) 01 (L0718262-01, WG306562-2) Antimony, Total 114 Beryllium, Total 110 Cadmium, Total 92 Chromium, Total 92 Chromium, Total 94 Silver, Total 88 Thallium, Total 99 Total Metals SPIKE for sample(s) 01 (L0718288-01, WG306411-2)		58	30~130	
Phenol 24 12-110 Surrogate(s) 2-Fluorophenol 35 21-120 Phenol-d6 30 10-120 Nitrobenzene-d5 66 23-120 2-Fluorobiphenyl 82 43-120 2,4,6-Tribromophenol 90 10-120 4-Terphenyl-d14 105 33-120 Cyanide, Total SPIKE for sample(s) 02 (L0718741-02, WG306245-3) Cyanide, Total SPIKE for sample(s) 01 (L0718262-01, WG306562-2) Antimony, Total 92 Arsenic, Total 114 Beryllium, Total 110 Cadmium, Total 92 Chromium, Total 92 Chromium, Total 92 Selenium, Total 120 Selenium, Total 94 Silver, Total 88 Thallium, Total 94 Silver, Total 99 Total Metals SPIKE for sample(s) 01 (L0718288-01, WG306411-2)	•	81		
Surrogate(s) 2-Fluorophenol 35 21-120 Phenol-d6 30 10-120 Nitrobenzene-d5 66 23-120 2-Fluorobiphenyl 82 43-120 2,4,6-Tribromophenol 90 10-120 4-Terphenyl-d14 105 33-120 Cyanide, Total SPIKE for sample(s) 02 (L0718741-02, WG306245-3) Cyanide, Total SPIKE for sample(s) 01 (L0718262-01, WG306562-2) Antimony, Total 92 Arsenic, Total 110 Beryllium, Total 110 Cadmium, Total 92 Chromium, Total 92 Chromium, Total 92 Chromium, Total 92 Chromium, Total 120 Selenium, Total 94 Silver, Total 88 Thallium, Total 109 Zinc, Total 99 Total Metals SPIKE for sample(s) 01 (L0718288-01, WG306411-2)	-	2.4	12-110	
2-Fluorophenol 35 21-120 Phenol-d6 30 10-120 Nitrobenzene-d5 66 23-120 2-Fluoropiphenyl 82 43-120 2,4,6-Tribromophenol 90 10-120 4-Terphenyl-d14 105 33-120 Cyanide, Total SPIKE for sample(s) 02 (L0718741-02, WG306245-3) Cyanide, Total 88 Total Metals SPIKE for sample(s) 01 (L0718262-01, WG306562-2) Antimony, Total 92 Arsenic, Total 114 Beryllium, Total 110 Cadmium, Total 120 Selenium, Total 120 Selenium, Total 120 Selenium, Total 109 Silver, Total 109 Total Metals SPIKE for sample(s) 01 (L0718288-01, WG306411-2)	THERE			
2-Fluorophenol 35 21-120 Phenol-d6 30 10-120 Nitrobenzene-d5 66 23-120 2-Fluoropiphenyl 82 43-120 2,4,6-Tribromophenol 90 10-120 4-Terphenyl-d14 105 33-120 Cyanide, Total SPIKE for sample(s) 02 (L0718741-02, WG306245-3) Cyanide, Total 88 Total Metals SPIKE for sample(s) 01 (L0718262-01, WG306562-2) Antimony, Total 92 Arsenic, Total 114 Beryllium, Total 110 Cadmium, Total 120 Selenium, Total 120 Selenium, Total 120 Selenium, Total 109 Silver, Total 109 Total Metals SPIKE for sample(s) 01 (L0718288-01, WG306411-2)	Surrogate(s)			
Phenol-d6 Nitrobenzene-d5 Nitrobenzene-d5 Phuorobiphenyl Phenol-d6 Nitrobenzene-d5 Phuorobiphenyl Phenol-d6 Nitrobenzene-d5 Phuorobiphenyl Ph	-	35	21-120	
2-Fluorobiphenyl 82 43-120 2,4,6-Tribromophenol 90 10-120 4-Terphenyl-d14 105 33-120 Cyanide, Total SPIKE for sample(s) 02 (L0718741-02, WG306245-3) Cyanide, Total 88 Total Metals SPIKE for sample(s) 01 (L0718262-01, WG306562-2) Antimony, Total 92 Arsenic, Total 114 Beryllium, Total 110 Cadmium, Total 92 Chromium, Total 92 Chromium, Total 120 Selenium, Total 94 Silver, Total 88 Thallium, Total 109 Zinc, Total 99 Total Metals SPIKE for sample(s) 01 (L0718288-01, WG306411-2)	Phenol-d6	30	10-120	
2,4,6-Tribromophenol 90 10-120 4-Terphenyl-d14 105 33-120 Cyanide, Total SPIKE for sample(s) 02 (L0718741-02, WG306245-3) Cyanide, Total 88 Total Metals SPIKE for sample(s) 01 (L0718262-01, WG306562-2) Antimony, Total 92 Arsenic, Total 114 Beryllium, Total 110 Cadmium, Total 92 Chromium, Total 92 Chromium, Total 94 Silver, Total 88 Total Metals SPIKE for sample(s) 01 (L0718288-01, WG306411-2)	Nitrobenzene-d5	66	23-120	
2,4,6-Tribromophenol 90 10-120 4-Terphenyl-d14 105 33-120 Cyanide, Total SPIKE for sample(s) 02 (L0718741-02, WG306245-3) Cyanide, Total Metals SPIKE for sample(s) 01 (L0718262-01, WG306562-2) Antimony, Total 92 Arsenic, Total 114 Beryllium, Total 110 Cadmium, Total 92 Chromium, Total 92 Chromium, Total 92 Selenium, Total 94 Silver, Total 94 Silver, Total 99 Total Metals SPIKE for sample(s) 01 (L0718288-01, WG306411-2)	2-Fluorobiphenvl	82	43-120	
Cyanide, Total SPIKE for sample(s) 02 (L0718741-02, WG306245-3) Cyanide, Total SPIKE for sample(s) 01 (L0718262-01, WG306562-2) Antimony, Total 92 Arsenic, Total 114 Beryllium, Total 110 Cadmium, Total 92 Chromium, Total 120 Selenium, Total 94 Silver, Total 88 Thallium, Total 109 Zinc, Total 99 Total Metals SPIKE for sample(s) 01 (L0718288-01, WG306411-2)		90	10-120	
Total Metals SPIKE for sample(s) 01 (L0718262-01, WG306562-2) Antimony, Total 92 Arsenic, Total 114 Beryllium, Total 110 Cadmium, Total 92 Chromium, Total 120 Selenium, Total 94 Silver, Total 88 Thallium, Total 109 Zinc, Total 99 Total Metals SPIKE for sample(s) 01 (L0718288-01, WG306411-2)	•	105	33-120	
Antimony, Total 92 Arsenic, Total 114 Beryllium, Total 110 Cadmium, Total 92 Chromium, Total 120 Selenium, Total 94 Silver, Total 88 Thallium, Total 109 Zinc, Total 99 Total Metals SPIKE for sample(s) 01 (L0718288-01, WG306411-2)			741-02, WG306245-3)	
Antimony, Total 92 Arsenic, Total 114 Beryllium, Total 110 Cadmium, Total 92 Chromium, Total 120 Selenium, Total 94 Silver, Total 88 Thallium, Total 109 Zinc, Total 99 Total Metals SPIKE for sample(s) 01 (L0718288-01, WG306411-2)	matal Matale CDIVE for co	molo/a) 01 // 071026	52_01 WC306562~2)	
Arsenic, Total 114 Beryllium, Total 110 Cadmium, Total 92 Chromium, Total 120 Selenium, Total 94 Silver, Total 88 Thallium, Total 109 Zinc, Total 99 Total Metals SPIKE for sample(s) 01 (L0718288-01, WG306411-2)			32 01, MG300302-2;	
Beryllium, Total 110 Cadmium, Total 92 Chromium, Total 120 Selenium, Total 94 Silver, Total 88 Thallium, Total 109 Zinc, Total 99 Total Metals SPIKE for sample(s) 01 (L0718288-01, WG306411-2)				
Cadmium, Total 92 Chromium, Total 120 Selenium, Total 94 Silver, Total 88 Thallium, Total 109 Zinc, Total 99 Total Metals SPIKE for sample(s) 01 (L0718288-01, WG306411-2)				
Chromium, Total 120 Selenium, Total 94 Silver, Total 88 Thallium, Total 109 Zinc, Total 99 Total Metals SPIKE for sample(s) 01 (L0718288-01, WG306411-2)	=			
Selenium, Total 94 Silver, Total 88 Thallium, Total 109 Zinc, Total 99 Total Metals SPIKE for sample(s) 01 (L0718288-01, WG306411-2)	•			
Silver, Total 88 Thallium, Total 109 Zinc, Total 99 Total Metals SPIKE for sample(s) 01 (L0718288-01, WG306411-2)	•			
Thallium, Total 109 Zinc, Total 99 Total Metals SPIKE for sample(s) 01 (L0718288-01, WG306411-2)	·	•		
Zinc, Total 99 Total Metals SPIKE for sample(s) 01 (L0718288-01, WG306411-2)				
Total Metals SPIKE for sample(s) 01 (L0718288-01, WG306411-2)	•			
	Zinc, Total	99		
	Total Metale SPTKE for ea	ample(s) 01 (1.07182)	88-01, WG306411-2)	
	Mercury, Total	122	, (

Laboratory Job Number: L0718741

Parameter	MS %	MSD %	RPD	RPD Limit	MS/MSD Limits
Volatile Organics by GC/MS 8260	for	cample(s) 02	(I.0718656-10	WG306184-21	
Chlorobenzene	93	87	7	20	75-130
Benzene	92	88	4	20	76-127
Toluene	92	87	6	20	76-125
1,1-Dichloroethene	90	85	6	20	61-145
Trichloroethene	93	88	6	20	71-120
Surrogate(s)					
1,2-Dichloroethane-d4	106	107	1		70-130
Toluene-d8	101	100	1		70-130
4-Bromofluorobenzene	97	100	3		70-130
Dibromofluoromethane	99	101	2		70-130
Semivolatile Organics by EPA 8270	C for	sample(s) 02	2 (L0718741-02,	. WG306314-4)	
Acenaphthene	94	90	4	30	46-118
1,2,4-Trichlorobenzene	75	83	10	30	39-98
2-Chloronaphthalene	90	90	0	30	40-140
1,2-Dichlorobenzene	79	75	5	30	40-140
1,4-Dichlorobenzene	71	71	0	30	36-97
2,4-Dinitrotoluene	94	90	4	30	24-96
2,6-Dinitrotoluene	98	90	9	30	40-140
Fluoranthene	110	100	10	30	40-140
4-Chlorophenyl phenyl ether	90	98	9	30	40-140
n-Nitrosodi-n-propylamine	75	79	5	30	41-116
Butyl benzyl phthalate	110	110	0	30	40-140
Anthracene	75	71	5	30	40-140
Pyrene	110	100	10	30	26-127
P-Chloro-M-Cresol	90	92	2	30	23-97
2-Chlorophenol	77	81	5	30	27-123
2-Nitrophenol	79	81	3	30	30-130
4-Nitrophenol	83	71	16	30	10-80
2,4-Dinitrophenol	96	94	2	30	30-130
Pentachlorophenol	120	120	0	30	9-103
Pheno1	69	58	17	30	12-110
Surrogate(s)					
2-Fluorophenol	68	68	0		21-120
Phenol-d6	82	71	14		10-120
Nitrobenzene-d5	83	86	4		23-120
2-Fluorobiphenyl	99	97	2		43-120
2,4,6-Tribromophenol	87	82	6		10-120
4-Terphenyl-d14	100	97	3		33-120

Laboratory Job Number: L0718741

PARAMETER	RESULT	UNITS	RDL	REF METHO	DD DATE IC PREP ANAL
	MAN				 -
	_	sample(s)			
Solids, Total Suspended	ND	mg/l	5.0	30 2540D	1219 15:15 DW
Blank An	alysis for	sample(s)	02 (WG3	06245-2)	
Cyanide, Total	ND	mg/l	0.0	D5 30 4500ch	P-CE 1218 16:30 1219 18:24 DE
Blank An	alvsis for	sample(s)	01 (WG3:	06562-3)	
Total Metals	az1010 101	odinpro (c)	J. (11 0 0	19 200.7	
n-ti-san Mahal	MEN	ma / 1	0.0	EO 30.000.3	1220 17:00 1221 15:39 AI
Antimony, Total	ND	mg/l			
Arsenic, Total	ND	mg/l	0.0		1220 17:00 1221 15:39 AI
Beryllium, Total	ND	mg/l	0.0		1220 17:00 1221 15:39 AJ
Cadmium, Total	ND	mg/1	0.0		1220 17:00 1221 15:39 AI
Chromium, Total	ND	mg/l	0.0		1220 17:00 1221 15:39 A
Selenium, Total	ND	mg/1	0.0		1220 17:00 1221 15:39 A
Silver, Total	ND	mg/l	0.0		1220 17:00 1221 15:39 A
Thallium, Total Zinc, Total	ND ND	mg/l mg/l	0.0		1220 17:00 1221 15:39 AT
Total Metals	diybib for	sample(s)	01 (1103	00111 1,	
Mercury, Total	ND	mg/l	0.0	002 3 245.1	1219 15:00 1220 12:49 R
		sample(s) (2 (WG30	6184-10)	
Volatile Organics by GC/MS	8260			1 8260B	1220 15:55 PI
Methylene chloride	ND	ug/l	5.0		
1,1-Dichloroethane	ND	ug/l	0.7		
Chloroform	ND	ug/l	0.7		
Carbon tetrachloride	ND	ug/l	0.5		
1,2-Dichloropropane	ND	ug/l	1.8		
Dibromochloromethane	ND	ug/l	0.5		
1,1,2-Trichloroethane	ND	ug/l	0.7		
Tetrachloroethene	ND	ug/l	0.5		
Chlorobenzene	ND	ug/l	0.5		
Trichlorofluoromethane	ND	ug/l	2.5		
1,2-Dichloroethane	ND	ug/l	0.5		
1,1,1-Trichloroethane	ND	ug/l	0.5		
Bromodichloromethane	ND	ug/l	0.5		
	ND	ug/l	0.5	0	
${\tt trans-1,3-Dichloropropene}$		ug/l	0.5	0	
<pre>trans-1,3-Dichloropropene cis-1,3-Dichloropropene</pre>	ND	ug/ i			
	ND ND	ug/l	2.5		
cis-1,3-Dichloropropene			2.5 2.0		
cis-1,3-Dichloropropene 1,1-Dichloropropene	ИD	ug/l)	
cis-1,3-Dichloropropene 1,1-Dichloropropene Bromoform	ИD ПИ	ug/l ug/l	2.0) 50	

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PARAMETER	RESULT	UNITS	\mathtt{RDL}	REF	METHOD	DA		ID
						PREP	ANAL	
Blank Analy:	sis for sa	mple(s) 02	(WG3061	84-10)				
Volatile Organics by GC/MS 8:					8260B		1220 15:5	55 PE
Ethylbenzene	ND	ug/l	0.50					
Chloromethane	ND	ug/l	2.5					
Bromomethane	ND	ug/l	1.0					
Vinyl chloride	ND	ug/l	1.0					
Chloroethane	ND	ug/l	1.0					
1,1-Dichloroethene	ND	ug/l	0.50					
trans-1,2-Dichloroethene	ND	ug/l	0.75					
Trichloroethene	ND	ug/l	0.50					
1,2-Dichlorobenzene	ND	ug/1	2.5					
1,3-Dichlorobenzene	ND	ug/l	2.5					
1,4-Dichlorobenzene	ND	ug/l	2.5					
Methyl tert butyl ether	ND	ug/l	1.0					
p/m-Xylene	ND	ug/l	1.0					
o-Xylene	ND	ug/l	1.0					
cis-1,2-Dichloroethene	ND	ug/l	0.50					
Dibromomethane	ND	ug/l	5.0					
1,4-Dichlorobutane	ND	ug/l	5.0					
1,2,3-Trichloropropane	ND	ug/l	5.0					
Styrene	ND	ug/l	1.0					
Dichlorodifluoromethane	ND	ug/l	5.0					
Acetone	ND	ug/l	5.0					
Carbon disulfide	ND	ug/1	5.0					
2-Butanone	ND	ug/l	5.0					
Vinyl acetate	ND	ug/l	5.0					
4-Methyl-2-pentanone	ND	ug/l	5.0					
2-Hexanone	ND	ug/l	5.0					
Ethyl methacrylate	ND	ug/l	5.0					
Acrylonitrile	ND	ug/l	5.0					
Bromochloromethane	ND	ug/l	2.5					
Tetrahydrofuran	ND	ug/l	10.					
2,2-Dichloropropane	ND	ug/l	2.5					
1,2-Dibromoethane	ND	ug/l	2.0					
1,3-Dichloropropane	ND	ug/l	2.5					
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50					
Bromobenzene	ND	ug/l	2.5					
n-Butylbenzene	ND	ug/l	0.50					
sec-Butylbenzene	ND	ug/l	0.50					
tert-Butylbenzene	ND	ug/l	2.5					
o-Chlorotoluene	ND	ug/l	2.5					
p-Chlorotoluene	ND	ug/l	2.5					
1,2-Dibromo-3-chloropropane	ND	ug/l	2.5					
Hexachlorobutadiene	ND	ug/l	0.60					
Isopropylbenzene	ND	ug/l	0.50					
p-Isopropyltoluene	ND	ug/l	0.50					
Naphthalene	ND	ug/l	2.5					
n-Propylbenzene	ND	ug/l	0.50					

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PARAMETER	RESULT	UNITS	RDL	REF METHOD	DA	
					PREP	ANAL
Blank Analy:	sis for sar	nple(s) 02	(WG3061	84-10)		
Volatile Organics by GC/MS 82	260 cont'd			1 8260B		1220 15:55 PD
1,2,3-Trichlorobenzene	ND	uq/l	2.5			
1,2,4-Trichlorobenzene	ND	ug/1	2.5			
1,3,5-Trimethylbenzene	ND	ug/l	2.5			
1,2,4-Trimethylbenzene	ND	ug/l	2.5			
trans-1,4-Dichloro-2-butene	ND	ug/l	2.5			
Ethyl ether	ND	ug/l	2.5			
Surrogate(s)	Recovery		QC Cr	iteria		
1,2-Dichloroethane-d4	99.0	96	70-13	0		
Toluene-d8	101	용	70-13	0		
4-Bromofluorobenzene	100	믬	70-13	0		
Dibromofluoromethane	101	ę	70-13	0		
Blank Analy		mple(s) 02	(WG3061	84-10)		
Volatile Organics by GC/MS 8	260			1 8260B		1220 15:55 PE
Tentatively Identified Compo	unds					
No Tentatively Identified						
Compounds	ND	ug/l				
Blank Analy	sis for sa	mple(s) 02	(WG3061	84-12)		
Volatile Organics by GC/MS 8			(55551	1 8260B		1221 10:01 PF
Methylene chloride	ND	ug/l	5.0			
1,1-Dichloroethane	ND	ug/l	0.75			
Chloroform	ND	ug/l	0.75			
Carbon tetrachloride	ND	ug/l	0.50			
1,2-Dichloropropane	ND	ug/l	1.8			
Dibromochloromethane	ND	ug/l	0.50			
1,1,2-Trichloroethane	ND	ug/l	0.75			
Tetrachloroethene	ND	ug/l	0.50			
Chlorobenzene	ND	ug/l	0.50			
Trichlorofluoromethane	ND	ug/l	2.5			
1,2-Dichloroethane	ND	ug/l	0.50			
1,1,1-Trichloroethane	ND	ug/l	0.50			
Bromodichloromethane	ИD	ug/l	0.50			
trans-1,3-Dichloropropene	ND	ug/l	0.50			
cis-1,3-Dichloropropene	ND	ug/l	0.50			
1,1-Dichloropropene	ND	ug/l	2.5			
Bromoform	ND	ug/l	2.0			
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50			
Benzene	ND	ug/l	0.50			
Toluene	ND	ug/l	0.75			
Ethylbenzene	ND	ug/l	0.50			
Chloromethane	ND	ug/l	2.5			
	ND	ua/l	1.0			
Bromomethane Vinyl chloride	ND ND	ug/l ug/l	1.0 1.0			

Laboratory Job Number: L0718741

PARAMETER	RESULT	UNITS	RDL	REF ME	THOD	DA		ID
						PREP	LANAL	
			111000051	04 101				
Blank Analys Wolatile Organics by GC/MS 82			(WG3061)	84-12) 1 82	6.0.B		1221 10:0	1 PD
	ND	ug/l	0.50	1 02	005		1221 10.0	
1,1-Dichloroethene	ND	ug/l	0.75					
trans-1,2-Dichloroethene	ИD	ug/1	0.50					
Trichloroethene		_	2.5					
1,2-Dichlorobenzene	ND	ug/l	2.5					
1,3-Dichlorobenzene	ND	ug/l	2.5					
1,4-Dichlorobenzene	ND	ug/l ug/l	1.0					
Methyl tert butyl ether	ND		1.0					
p/m-Xylene	ND	ug/l						
o-Xylene	ND	ug/1	1.0					
cis-1,2-Dichloroethene	ND	ug/1	0.50 5.0					
Dibromomethane	ND	ug/1						
1,4-Dichlorobutane	ND	ug/1	5.0					
1,2,3-Trichloropropane	ND	ug/1	5.0					
Styrene	ND	ug/l	1.0					
Dichlorodifluoromethane	ND	ug/l	5.0					
Acetone	ND	ug/l	5.0					
Carbon disulfide	ND	ug/1	5.0					
2-Butanone	ND	ug/l	5.0					
Vinyl acetate	ND	ug/1	5.0					
4-Methy1-2-pentanone	ND	ug/l	5.0					
2-Hexanone	ND	ug/l	5.0					
Ethyl methacrylate	ND	ug/l	5.0					
Acrylonitrile	ND	ug/l	5.0					
Bromochloromethane	ND	ug/l	2.5					
Tetrahydrofuran	ND	ug/l	10.					
2,2-Dichloropropane	ND	ug/1	2.5					
1,2-Dibromoethane	ND	ug/1	2.0					
1,3-Dichloropropane	ИD	ug/l	2.5					
1,1,1,2-Tetrachloroethane	ND	ug/1	0.50					
Bromobenzene	ND	ug/l	2.5					
n-Butylbenzene	ND	ug/1	0.50					
sec-Butylbenzene	ND	ug/1	0.50					
tert-Butylbenzene	ND	ug/1	2.5					
o-Chlorotoluene	ND	ug/1	2.5					
p-Chlorotoluene	ND	ug/1	2.5					
1,2-Dibromo-3-chloropropane	ND	ug/1	2.5					
Hexachlorobutadiene	ND	ug/1	0.60					
Isopropylbenzene	ND	ug/1	0.50					
p-Isopropyltoluene	ND	ug/l	0.50					
Naphthalene	ND	ug/l	2.5					
n-Propylbenzene	ND	ug/l	0.50					
1,2,3-Trichlorobenzene	ND	ug/l	2.5					
1,2,4-Trichlorobenzene	ND	ug/l	2.5					
1,3,5-Trimethylbenzene	ND	ug/l	2.5					
1,2,4-Trimethylbenzene	ND	ug/l	2.5					
trans-1,4-Dichloro-2-butene	ND	ug/l	2.5					

Laboratory Job Number: L0718741

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE ID PREP ANAL		
Blank Analys	vie for ea	mnle/e) 02	/wc3061	84-12)			
Volatile Organics by GC/MS 82			(1100001	1 8260В	1221 1	0:01 PE	
Ethyl ether	ND	uq/l	2.5				
rrul ecuei	ND	49/1	210				
Surrogate(s)	Recovery		QC Cr	riteria			
1,2-Dichloroethane-d4	100	90	70-13	30			
Toluene-d8	100	ojo	70-13	30			
4-Bromofluorobenzene	102	96	70-13	30			
Dibromofluoromethane	98.0	ક	70-13	30			
Blank Anal	ysis for s	ample(s) 0	2 (WG306	5314-1)			
Semivolatile Organics by EPA				1 8270C	1218 17:00 1219 1	0:21 PF	
Acenaphthene	ND	ug/l	5.0				
Benzidine	ND	ug/l	50.				
1,2,4-Trichlorobenzene	ND	ug/l	5.0				
Hexachlorobenzene	ND	ug/l	5.0				
Bis(2-chloroethyl)ether	ND	ug/l	5.0				
2-Chloronaphthalene	ND	ug/1	6.0				
1,2-Dichlorobenzene	ND	ug/l	5.0				
1,3-Dichlorobenzene	ND	ug/l	5.0				
1,4-Dichlorobenzene	ND	ug/l	5.0				
3,3'-Dichlorobenzidine	ND	ug/l	50.				
2,4-Dinitrotoluene	ND	ug/l	6.0				
2,6-Dinitrotoluene	ND	ug/l	5.0				
Azobenzene	ND	ug/l	5.0				
Fluoranthene	ND	${\tt ug/l}$	5.0				
4-Chlorophenyl phenyl ether	ND	ug/l	5.0				
4-Bromophenyl phenyl ether	ИD	ug/1	5.0				
Bis(2-chloroisopropyl)ether	ИD	ug/l	5.0				
Bis(2-chloroethoxy)methane	ИD	ug/l	5.0				
Hexachlorobutadiene	ND	ug/l	10.				
Hexachlorocyclopentadiene	ND	ug/1	30.				
Hexachloroethane	ND	ug/l	5.0				
Isophorone	ИD	ug/l	5.0				
Naphthalene	ИD	ug/l	5.0				
Nitrobenzene	ND	ug/l	5.0				
NitrosoDiPhenylAmine(NDPA)/I	DPA ND	ug/l	15.				
Bis(2-Ethylhexyl)phthalate		ug/l	5.0				
Butyl benzyl phthalate	ND	ug/l	5.0				
Di-n-butylphthalate	ND	ug/l	5.0				
Di-n-octylphthalate	ND	ug/l	5.0				
Diethyl phthalate	ND	ug/1	5.0				
Dimethyl phthalate	ND	ug/l	5.0				
Benzo(a)anthracene	ИD	ug/l	5.0				
Benzo(a)pyrene	ИD	ug/l	5.0				
Benzo(b)fluoranthene	ND	ug/l	5.0				
Benzo(k)fluoranthene	ND	ug/l	5.0				
Chrysene	ND	ug/l	5.0				

Laboratory Job Number: L0718741

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE	ID
					PREP	ANAL
Blank Analy	sis for sa	ample(s) 0	2 (WG306	314-1)		
Semivolatile Organics by EPA				1 8270C	1218 17:00 12	19 10:21 PS
Acenaphthylene	ND	ug/l	5.0			
Anthracene	ND	ug/l	5.0			
Benzo(ghi)perylene	ND	ug/l	5.0			
Fluorene	ND	ug/l	5.0			
Phenanthrene	ND	ug/l	5.0			
Dibenzo(a,h)anthracene	ND	ug/l	5.0			
Indeno(1,2,3-cd)Pyrene	ND	ug/l	7.0			
Pyrene	ND	ug/l	5.0			
Aniline	ND	ug/l	20.			
4-Chloroaniline	ND	ug/l	5.0			
1-Methylnaphthalene	ND	ug/l	5.0			
2-Nitroaniline	ND	ug/l	5.0			
3-Nitroaniline	ND	ug/l	5.0			
4-Nitroaniline	ND	ug/l	7.0			
Dibenzofuran	ND	ug/l	5.0			
2-Methylnaphthalene	ИD	ug/l	5.0			
n-Nitrosodimethylamine	ND	ug/l	50.			
2,4,6-Trichlorophenol	ND	ug/l	5.0			
P-Chloro-M-Cresol	ND	ug/l	5.0			
2-Chlorophenol	ИD	ug/l	6.0			
2,4-Dichlorophenol	ND	ug/l	10.			
2,4-Dimethylphenol	ND	ug/l	10.			
2-Nitrophenol	ND	ug/l	20.			
4-Nitrophenol	ND	ug/l	10.			
2,4-Dinitrophenol	ЙD	ug/l	30.			
4,6-Dinitro-o-cresol	ND	ug/l	20.			
Pentachlorophenol	ND	ug/1	10.			
Phenol	ND	ug/l	7.0			
2-Methylphenol	ND	ug/l	6.0			
3-Methylphenol/4-Methylphenol		ug/l	6.0			
2,4,5-Trichlorophenol	ND	ug/l	5.0			
Benzoic Acid	ND	ug/l	50.			
Benzyl Alcohol	ND	ug/l	10.			
Carbazole	ND	ug/l	5.0			
Pyridine	ND	ug/l	50.			
Surrogate(s)	Recovery			riteria		
2-Fluorophenol	35.0	96	21-1			
Phenol-d6	28.0	çlo -	10-1			
Nitrobenzene-d5	66.0	<u>р</u> -	23-1			
2-Fluorobiphenyl	69.0	olo	43-1			
2,4,6-Tribromophenol	68.0	ok	10-1			
4-Terphenyl-d14	101	ે	33-1	20		

ALPHA ANALYTICAL LABORATORIES ADDENDUM I

REFERENCES

- Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I IIIA, 1997.
- 3. Methods for the Determination of Metals in Environmental Samples, Supplement I. EPA/600/R-94/111. May 1994.
- 19. Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.
- 30. Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF.

GLOSSARY OF TERMS AND SYMBOLS

REF Reference number in which test method may be found.

METHOD Method number by which analysis was performed.

ID Initials of the analyst.

ND Not detected in comparison to the reported detection limit.

NI Not Ignitable.

ug/cart Micrograms per Cartridge.

The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

LIMITATION OF LIABILITIES

Alpha Analytical, Inc. performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical, Inc., shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical, Inc. be held liable for any incidental consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical, Inc.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding times and splitting of samples in the field.

PLEASE ANSWER QUESTIONS ABOVE IS YOUR PROJECT MA MICP or CT RCP?	WESTBORO. MA TEL: 508-898-9220 FAX: 508-898-9193 FAX: 508-898-9193 FAX: 508-898-9193 FAX: 508-898-9193 FAX: 508-898-9193 FAX: 508-892-924 FAX: 508-892-9193 FAX: 508-892-924 FAX: 508-892-9193 FAX: 508-892-92 FAX: 508-892-9193 FAX: 508-892-92 FAX: 508-892-92 FAX: 508-892-9193 FAX: 508-892-92 FAX: 508-892-9193 FAX: 508-892-92 FAX: 50	
ESTIONS ABOVE! OJECT CT RCP?	STBORO, MA ISSUED, MA ISSUED, MA ISSUEDS, MA ISSUEDS, MA ISSUEDS, MA ISSUEDS, MA INC. SOB-893-9220 THEL: 508-822-2900 THEL:	
Relinquished By:	Project Informal Project Name: E Project Name: E Project Location: (Project #: Project Manager: ALPHA Quote #: Turn-Around Tin Date Due: 12-12-21 12-21-21 12-12-)
Container Type Preservative A Date/Time	PASE LOF L MAINTENE NCC MAINTENE NCC LE MAINTENE NCC Sample Sampler's Initials Matrix Initials E KL E KL E KL	ļ —
P P P P P P P P P P P P P P P P P P P	Date Rec'd in Lab: /1 Report Information-Date DEMAIL DEMAIL	,
Date/Time	B(D) Deliverables Report Limit Entainty Analytical Met DP (Reasonab	· ·
Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms. See reverse side.	ALPHA Job #: LD 1 8 CI Billing Information CTREASONABLECONFIDENCEPROTOCOLS hods Required? le Confidence Protocols) Required? Sample Specific Comments	}

ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive

Westborough, Massachusetts 01581-1019

(508) 898-9220

www.alphalab.com

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

CERTIFICATE OF ANALYSIS

Client: Rohm & Haas

Laboratory Job Number: L0714684

Address: 455 Forest Street

Date Received: 04-OCT-2007

Marlboro, MA 01752

Date Reported: 18-OCT-2007

Attn: Mr. Keith LeMaire

Delivery Method: Client

Project Number:

Site: SEMI ANNUAL (OCT)

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L0714684-01	COMP	ATC-NS02
L0714684-02	GRAB	ATC-NS02
L0714684-03	TRIP BLANK	ATC-NS02

Authorized by:

Technical Representative

Michelle M. Monio

10180721:46 Page 1 of 21

^{1,} the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

ALPHA ANALYTICAL LABORATORIES NARRATIVE REPORT

Laboratory Job Number: L0714684

The samples were received in accordance with the chain of custody and no significant deviations were encountered during preparation or analysis unless otherwise noted below.

Sample Receipt

The samples were received at the laboratory above the required temperature range. The samples were transported to the laboratory in a cooler with ice and delivered directly from the sampling site.

BOD

L0714684-01 is non-detect at an elevated detection limit due to the 5x dilution required for analysis of higher BOD concentrations. The dilutions for the BOD analysis were set based on COD prep data; however, no reportable BOD depletion occurred. The sample cannot be reanalyzed due to expired hold time.

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number: L0714684-01

Date Collected: 04-0CT-2007 08:30

COMP

Date Received: 04-OCT-2007

Sample Matrix:

WATER

Date Reported: 18-OCT-2007

Condition of Sample: Satisfactory

Field Prep:

None

Number & Type of Containers: 4-Plastic

PARAMETER	RESULT	UNITS	RDL :	REF METHOD	DATE 1	ID
					PREP ANAL	
Solids, Total Suspended	ND	mg/l	5.0	30 2540D	1008 09:00 1	DΝ
Nitrogen, Ammonia	1.40	mg/l	0.400	30 4500NH3-BE	1011 13:59	JL
Phosphorus, Total	0.02	mg/l	0.01	30 4500P-E	1010 15:00 1	HS
Chemical Oxygen Demand	250	mg/l	20	30 52200	1018 07:30	DM
BOD, 5 day	ND	mg/l	10.	30 5210B	1005 12:50 1010 12:00 1	DW
Fotal Metals				19 200.7		
Aluminum, Total	ND	mg/l	0.10	19 200.7	1012 16:40 1016 13:23	ΑI
Antimony, Total	ND	mg/1	0.050	19 200.7	1012 16:40 1016 13:23	ΑI
Arsenic, Total	ND	${\sf mg/1}$	0.005	19 200.7	1012 16:40 1016 13:23	ΑI
Beryllium, Total	ND	mg/1	0.005	19 200.7	1012 16:40 1016 13:23	AI
Cadmium, Total	ND	${\sf mg/l}$	0.005	19 200.7	1012 16:40 1016 13:23	ΑI
Chromium, Total	ND	${\sf mg/l}$	0.01	19 200.7	1012 16:40 1016 13:23	ΑI
Copper, Total	0.025	mg/1	0.010	19 200.7	1012 16:40 1016 13:23	ΑI
Lead, Total	ND	mg/1	0.010	19 200.7	1012 16:40 1016 13:23	ΑI
Mercury, Total	ND	${\sf mg/l}$	0.0002	3 245.1	1010 18:00 1011 12:32 1	RC
Nickel, Total	ND	mg/l	0.025	19 200.7	1012 16:40 1016 13:23	ΑŢ
Selenium, Total	ND	mg/l	0.010	19 200.7	1012 16:40 1016 13:23 /	ΑI
Silver, Total	ND	mg/l	0.007	19 200.7	1012 16:40 1016 13:23	ΑI
Thallium, Total	ND	mg/l	0.020	19 200.7	1012 16:40 1016 13:23	ΑI
Zinc, Total	ND	mg/l	0.050	19 200.7	1012 16:40 1016 13:23	ΑI

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number: L0714684-02

Date Collected: 04-OCT-2007 08:30

GRAB

Date Received : 04-OCT-2007

Sample Matrix:

WATER

Date Reported : 18-OCT-2007

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 5-Amber, 1-Plastic, 2-Vial

PARAMETER	RESULT	UNITS	RDL	REF METHOD	D.A	TE	ID
					PREP	ANAL	
Cyanide, Total	ND	mg/l	0.005	30 4500CN-CE	1005 10:45	1005 17:20	DD D
Oil & Grease, Hem-Grav	ND	mg/l	4.0	74 1664A	1015 13:00	1016 13:15	AT
Phenolics, Total	ND	mg/l	0.03	4 420.1		1009 09:30	AT
Volatile Organics by GC/MS	624			5 624		1007 22:32	MM.
Methylene chloride	ND	ug/l	5.0			100. 22.32	
l,1-Dichloroethane	ND	ug/l	1.5				
Chloroform	ND	ug/l	1.5				
Carbon tetrachloride	ND	ug/l	1.0				
l,2-Dichloropropane	ND	ug/l	3.5				
Dibromochloromethane	ND	ug/l	1.0				
,1,2-Trichloroethane	ND	ug/l	1.5				
2-Chloroethylvinyl ether	ND	ug/l	10.				
letrachloroethene	ND	ug/l	1.5				
Chlorobenzene	ND	ug/l	3.5				
,2-Dichloroethane	ND	ug/l	1.5				
,1,1-Trichloroethane	ND	ug/l	2.0				
Bromodichloromethane	ND	ug/l	1.0				
rans-1,3-Dichloropropene	ND	ug/l	1.5				
cis-1,3-Dichloropropene	ND	ug/l	1.5				
3romoform	ND	ug/l	1.0				
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0				
Benzene	ND	ug/l	1.0				
l'oluene	ND	ug/1	1.0				
Ethylbenzene	ND	ug/l	1.0				
Chloromethane	ND	ug/l	10.				
Bromomethane	ND	ug/l	5.0				
Jinyl chloride	ND	ug/l	2.0				
Chloroethane	ND	ug/l	2.0				
,1-Dichloroethene	ND	ug/l	1.0				
rans-1,2-Dichloroethene	ND	ug/l	1.5				
Trichloroethene	ND	ug/l	1.0				
1,2-Dichlorobenzene	ND	ug/l	5.0				
1,3-Dichlorobenzene	ND	ug/l	5.0				
l,4-Dichlorobenzene	ND	ug/l	5.0				
Acrolein	ИD	ug/l	8.0				
Acrylonitrile	ND	ug/1	10.				

Comments: Complete list of References and Glossary of Terms found in Addendum $\ensuremath{\text{I}}$

Laboratory Sample Number: L0714684-02

GRAB

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DA		ID	
					PREP ANAL			
Volatile Organics by GC/MS 6	24 cont'd			5 624		1007 22:	32 MM	
Surrogate(s)	Recovery		OC Cr	iteria				
Pentafluorobenzene	99.0	90	80-12	0				
Fluorobenzene	106	a o	80-12					
4-Bromofluorobenzene	102	90	80-12					
SVOC's by GC/MS 625				5 625	1009 17:00	1018 14:	13 PS	
Acenaphthene	ND	ug/l	4.9					
Benzidine	ND	ug/l	49.					
1,2,4-Trichlorobenzene	ND	ug/l	4.9					
Hexachlorobenzene	ND	ug/l	4.9					
Bis(2-chloroethyl)ether	ND	ug/l	4.9					
2-Chloronaphthalene	ND	ug/l	5.9					
1,2-Dichlorobenzene	ND	ug/l	4.9					
1,3-Dichlorobenzene	ND	ug/l	4.9					
1,4-Dichlorobenzene	ND	ug/l	4.9					
3,3'-Dichlorobenzidine	ND	ug/l	49.					
2,4-Dinitrotoluene	ND	ug/l	5.9					
2,6-Dinitrotoluene	ND	ug/l	4.9					
Azobenzene	ND	ug/l	1.9					
Fluoranthene	ND	ug/l	4.9					
4-Chlorophenyl phenyl ether	ND	ug/l	4.9					
4-Bromophenyl phenyl ether	ND	ug/l	4.9					
Bis(2-chloroisopropyl)ether	ND	ug/l	4.9					
Bis(2-chloroethoxy)methane	ND	ug/l	4.9					
Hexachlorobutadiene	ND	ug/l	9.9					
Hexachlorocyclopentadiene	ND	ug/l	30.					
Hexachloroethane	ND	ug/l	4.9					
Isophorone	ND	ug/l	4.9					
Naphthalene	ND	ug/l	4.9					
Nitrobenzene	ND	ug/l	4.9					
NDPA/DPA	ND	ug/l	15.					
n-Nitrosodi-n-propylamine	ND	ug/l	4.9					
Bis(2-ethylhexyl)phthalate	ND	ug/l	4.9					
Butyl benzyl phthalate	ND	ug/l	4.9					
Di-n-butylphthalate	ND	ug/l	4.9					
Di-n-octylphthalate	ND	ug/1	4.9					
Diethyl phthalate	ND	ug/l	4.9					
Dimethyl phthalate	ND	ug/l	4.9					
Benzo(a)anthracene	ND	ug/l	4.9					
Benzo(a)pyrene	ND	ug/l	4.9					
Benzo(b) fluoranthene	ND	ug/1	4.9					
Benzo(k) fluoranthene	ND	ug/l ug/l	4.9					
Chrysene	ND	ug/l	4.9					
Acenaphthylene	ND	ug/1 ug/l	4.9					
Anthracene	ND	ug/l ug/l	4.9					
Benzo(ghi)perylene	ND ND	ug/l ug/l	4.9					
Fluorene	ND ND							
Phenanthrene	ND	ug/l	4.9					
Dibenzo(a,h)anthracene		ug/l	4.9					
~	ND	ug/l	4.9					

Laboratory Sample Number: L0714684-02

GRAB

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DA	TE	ID	
					PREP ANAI		_	
SVOC's by GC/MS 625 cont'd				5 625	1009 17:00	1018 14:1	.3 PS	
Indeno(1,2,3-cd)pyrene	ND	ug/l	6.9					
Pyrene	ND	ug/l	4.9					
n-Nitrosodimethylamine	ND	ug/l	49.					
2,4,6-Trichlorophenol	ND	ug/l	4.9					
p-Chloro-m-cresol	ND	ug/l	4.9					
2-Chlorophenol	ND	ug/l	5.9					
2,4-Dichlorophenol	ND	ug/l	9.9					
2,4-Dimethylphenol	ND	ug/l	9.9					
2-Nitrophenol	ND	ug/l	20.					
4-Nitrophenol	ND	ug/l	9.9					
2,4-Dinitrophenol	ND	ug/l	30.					
4,6-Dinitro-o-cresol	ND	ug/1	20.					
Pentachlorophenol	ND	ug/l	9.9					
Phenol	ND	ug/l	6.9					
2-Methylphenol	ND	ug/l	5.9					
3-Methylphenol/4-Methylphenol	ND	ug/l	5.9					
Surrogate(s)	Recovery		QC Crit	teria				
2-Fluorophenol	33.0	olo O	21-120					
Phenol-d6	27.0	9	10-120					
Nitrobenzene-d5	54.0	9	23-120					
2-Fluorobiphenyl	53.0	8	43-120					
2,4,6-Tribromophenol	86.0	8	10-120					
4-Terphenyl-d14	91.0	90	33-120					

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number: L0714684-03

Date Collected: 03-OCT-2007 10:15

TRIP BLANK

Date Received: 04-OCT-2007

Sample Matrix:

WATER

Date Reported: 18-OCT-2007

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1-Vial

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID	
					PREP	ANAL	•	
olatile Organics by GC/MS	624			5 624		1007 21:	57 MM	
Methylene chloride	ND	ug/l	5.0					
l,1-Dichloroethane	ND	ug/l	1.5					
Chloroform	ND	ug/l	1.5					
Carbon tetrachloride	ND	ug/l	1.0					
1,2-Dichloropropane	ND	ug/l	3.5					
Dibromochloromethane	ND	ug/l	1.0					
l,1,2-Trichloroethane	ND	ug/l	1,5					
2-Chloroethylvinyl ether	ND	ug/l	10.					
Tetrachloroethene	ND	ug/l	1.5					
Chlorobenzene	ND	ug/l	3.5					
l,2-Dichloroethane	ND	ug/l	1.5					
l,1,1-Trichloroethane	ND	ug/l	2.0					
Bromodichloromethane	ND	ug/l	1.0					
trans-1,3-Dichloropropene	ND	ug/l	1.5					
cis-1,3-Dichloropropene	ND	ug/l	1.5					
Bromoform	ND	ug/l	1.0					
1,1,2,2-Tetrachloroethane	ND	uq/l	1.0					
Benzene	ND	ug/l	1.0					
Toluene	ND	ug/l	1.0					
Sthylbenzene	ND	ug/l	1.0					
Chloromethane	ND	ug/l	10.					
Bromomethane	ND	ug/l	5.0					
/inyl chloride	ND	ug/l	2.0					
Chloroethane	ND	ug/l	2.0					
l,1-Dichloroethene	ND	ug/l	1.0					
rans-1,2-Dichloroethene	ND	ug/l	1.5					
Trichloroethene	ND	ug/l	1.0					
l,2-Dichlorobenzene	ND	ug/l	5.0					
l,3-Dichlorobenzene	ND	ug/l	5.0					
l,4-Dichlorobenzene	ND	ug/l	5.0					
Acrolein	ND	ug/l	8.0					
Acrylonitrile	ND	ug/l	10.					
Surrogate(s)	Recovery		QC Cr	iteria				
Pentafluorobenzene	94.0	Q ₀	80-12					
Fluorobenzene	104	98	80-12					
4-Bromofluorobenzene	99.0	9 6	80-12					

Laboratory Job Number: L0714684

Parameter	Value 1	Value 2	Units	RPD	RPD Limits
Solids, Tota	al Suspended f	or sample(s) 01 (L071	4589-02,	WG297053-2)
olids, Total Suspended	4700	4800	mg/l	2	32
Cyanide,	Total for sa	mple(s) 02	(L0714666-	01, WG29	6864-3)
yanide, Total	ND	ND	mg/l	NC	
	Ammonia for			1-02, WG2	297647-3)
itrogen, Ammonia	27.2	27.1	mg/l	0	20
	us, Total for		1 (LO71495	6-03, WG2	297549-3}
hosphorus, Total	0.45	0.45	mg/l	0	20
	gen Demand fo			684-01, W	NG298484-4)
hemical Oxygen Demand	250	240	mg/l	4	12
	day for samp		0714404-53	, WG29690	00-4)
OD, 5 day	3.8	3.5	mg/l	8	35
Oil & Grease	e, Hem-Grav fo	r sample(s)	02 (L0715)	101-02, V	VG298148-4)
oil & Grease, Hem-Grav	6.3	6.9	mg/l	9	18
Phenolics	s, Total for s	ample(s) 02	(L0714536	-01, WG29	97304-4)
henolics, Total	0.32	0.31	mg/l	3	12
Total N	Metals for sam	ple(s) 01 (1	L0714684-0	1, WG2979	945-1)
Aluminum, Total	ND	ND	mg/l	NC	
ntimony, Total	ND	ND	mg/l	NC	
rsenic, Total	ND	ND	mg/l	ИС	
eryllium, Total	ND	ND	mg/l	NC	
admium, Total hromium, Total	ND ND	ND	mg/l	NC	
opper, Total	0.025	ND 0.024	mg/l	NC	
ead, Total	ND	0.024	mg/l	3	
ickel, Total	ND	ND	mg/l	NC	
elenium, Total	ND ND	ND ND	mg/l	NC	
ilver, Total	ND	ND ND	mg/l	NC	
hallium, Total	ND ND	ND	mg/l	NC NC	
inc, Total	ND	ИD	mg/l	NC NC	
			mg/l	NC	
Total Mercury, Total	Metals for sam ND	ple(s) 01 (1 ND			559~3)
			mg/l	ИС	
	hy GC/MS 624	for sample	(s) 02-03	(L0714647	7-03, WG297075-2)
Volatile Organics					
Chlorobenzene	ND	ND	ug/l	NC	30
Volatile Organics Chlorobenzene Benzene 1,2-Dichlorobenzene				NC NC	30 30 30

Laboratory Job Number: L0714684

		Units	RPD	RPD Lim	1. CS
by GC/MS 624	for sample	e(s) 02-03	(L071464	7-03, WG29	7075-2)
	-	Q			QC Criteri
					80-120
103					80-120 80-120
					00 120
			16-01, W	G297393-4)	
		ug/l	NC	30	
		ug/l	NC	30	
ND	ND	ug/l	NC	30	
ND	ND	ug/l	NC	30	
ND	ND	ug/l	NC	30	
ND	ND	ug/l	NC	30	
ND	ND	ug/l	NC	30	
ND	ND	ug/l	NC	30	
ND	ND	=			
ND	ND	=			
ND	ND	=			
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		•			
		-			
			NC	30	
	ND	ug/l	NC	30	
ND	ND	ug/l	NC	30	
ND	ND	ug/l	NC	30	
ND	ND	ug/l	NC	30	
ND	ND	ug/l	ИС	30	
ND	ND	ug/l	NC	30	
ND	ND	ug/l	NC	30	
ND	ND	-			
ND		-			
		_			
		_			
ND	ND	uq/ L	NC	30	
	Reco 96.0 103 102 C/MS 625 for ND	Recovery 96.0 100 103 102 102 95.0 C/MS 625 for sample(s) ND ND ND ND ND ND ND	Recovery 96.0 100 % 103 102 % 102 95.0 % C/MS 625 for sample(s) 02 (L07146 ND ND Ug/l	Recovery 96.0 100 % 103 102 % 102 95.0 % C/MS 625 for sample(s) 02 (L0714616-01, WG ND ND Ug/1 NC	96.0 100 % 103 102 % 102 95.0 % C/MS 625 for sample(s) 02 (L0714616-01, WG297393-4) ND ND Ug/1 NC 30 ND ND Ug/1 NC 30

Laboratory Job Number: L0714684

Parameter	Value 1	Value 2	Units	RPD	RPD Lin	its
SVOC's by GC/	'MS 625 for	sample(s)	02 (1,07146	516-01. W	G297393-4)	
Phenanthrene	ND	ND	ug/l	NC	30	
Dibenzo(a,h)anthracene	ND	ND	ug/l	NC	30	
Indeno(1,2,3-cd)pyrene	ND	ND	ug/l	NC	30	
Pyrene	ND	ND	ug/l	NC	30	
Aniline	ND	ND	ug/l	NC	30	
4-Chloroaniline	ND	ND	ug/l	NC	30	
1-Methylnaphthalene	ND	ND	ug/l	NC	30	
2-Nitroaniline	ND	ND	ug/l	NC	30	
3-Nitroaniline	ND	ND	ug/l	NC	30	
4-Nitroaniline	ND	ND	ug/l	NC	30	
Dibenzofuran	ND	ND	ug/l	NC	30	
2-Methylnaphthalene	ND	ND	ug/l	NC	30	
n-Nitrosodimethylamine	ND	ND	ug/l	NC	30	
2,4,6-Trichlorophenol	ИD	ND	ug/l	NC	30	
p-Chloro-m-cresol	ND	ND	ug/l	NC	30	
2-Chlorophenol	ND	ND	ug/l	NC	30	
2,4-Dichlorophenol	ND	ND	ug/l	NC	30	
2,4-Dimethylphenol	ND	ND	ug/l	NC	30	
2-Nitrophenol	ND	ND	ug/l	NC	30	
4-Nitrophenol	ND	ND	ug/l	NC	30	
2,4-Dinitrophenol	ND	ND	uq/l	NC	30	
4,6-Dinitro-o-cresol	ND	ND	ug/l	NC	30	
Pentachlorophenol	ND	ND	ug/l	NC	30	
Phenol	ND	ND	ug/l	NC	30	
2-Methylphenol	ND	ИD	uq/l	NC	30	
3-Methylphenol/4-Methylphenol	ND	ND	ug/l	NC	30	
2,4,5-Trichlorophenol	ND	ND	ug/l	NC	30	
2,6-Dichlorophenol	ND	ND	ug/l	NC	30	
Benzoic Acid	ND	ND	ug/l	NC	30	
Benzyl Alcohol	ND	ND	ug/l	NC	30	
Carbazole	ND	ИD	ug/l	NC	30	
Surrogate(s)	Reco	very				QC Criteria
2-Fluorophenol	34.0	43.0	96			21-120
Phenol-d6	27.0	43.0	5			10-120
Nitrobenzene-d5	58.0	56.0	ક			23-120
2-Fluorobiphenyl	56.0	56.0	몽			43-120
2,4,6-Tribromophenol	88.0	84.0	96			10-120
4-Terphenyl-d14	80.0	83.0	ક			33-120

Laboratory Job Number: L0714684

Parameter	% Recovery QC Criteria
Cyanide, Total LCS for Cyanide, Total	c sample(s) 02 (WG296864-2) 103
Nitrogen, Ammonia LCS fo Nitrogen, Ammonia	or sample(s) 01 (WG297647-2) 89 80-120
Phosphorus, Total LCS for Phosphorus, Total	or sample(s) 01 (WG297549-2) 107 85-115
Chemical Oxygen Demand LCS Chemical Oxygen Demand	G for sample(s) 01 (WG298484-2) 97 93-106
BOD, 5 day LCS for s	sample(s) 01 (WG296900-2) 114 85-115
Oil & Grease, Hem-Grav LCS Oil & Grease, Hem-Grav	S for sample(s) 02 (WG298148-2) 90 78-114
Phenolics, Total LCS for Phenolics, Total	or sample(s) 02 (WG297304-2) 94 82-111
	sample(s) 01 (WG297945-4)
Aluminum, Total	100
Antimony, Total Arsenic, Total	100
Beryllium, Total	108 101
Cadmium, Total	108
Chromium, Total	100
Copper, Total	95
Lead, Total	100
Nickel, Total	96
Selenium, Total Silver, Total	109
Thallium, Total	98 102
Zinc, Total	94
Total Metals LCS for Mercury, Total	sample(s) 01 (WG297559-1) 98
McLedly, Ideal	50
	CCS for sample(s) 02-03 (WG297075-5)
Methylene chloride	114 10-221
1,1-Dichloroethane	99 59-155
Chloroform Carbon tetrachloride	104 51-138
1,2-Dichloropropane	$ \begin{array}{r} 101 & 70-140 \\ 116 & 10-210 \end{array} $
Dibromochloromethane	94 53-149
1,1,2-Trichloroethane	94 52-150
2-Chloroethylvinyl ether	100 10-305
Tetrachloroethene	95 64-148

Laboratory Job Number: L0714684

Parameter	% Recovery QC Criteria	
Volatile Organics by GC/MS 624 L	CS for sample(s) 02-03 (WG2	97075-5)
Chlorobenzene	95 37-160	· · · · · · ·
Trichlorofluoromethane	121 17-181	
1,2-Dichloroethane	108 49-155	
1,1,1-Trichloroethane	92 52-162	
Bromodichloromethane	95 35-155	
trans-1,3-Dichloropropene	85 17-183	
cis-1,3-Dichloropropene	86 10-227	
Bromoform	90 45-169	
1,1,2,2-Tetrachloroethane	93 46-157	
Benzene	116 37-151	
Toluene	103 47-150	
Ethylbenzene	106 37-162	
Chloromethane	126 10-273	
Bromomethane	115 10-242	
Vinyl chloride	128 10-251	
Chloroethane	126 14-230	
1,1-Dichloroethene	124 10-234	
trans-1,2-Dichloroethene	111 54-156	
cis-1,2-Dichloroethene	103 60-140	
Trichloroethene	112 71-157	
1,2-Dichlorobenzene	99 18–190	
1,3-Dichlorobenzene	95 59-156	
1,4-Dichlorobenzene	101 18-190	
p/m-Xylene	112 40-160	
o-Xylene	102 40-160	
XYLENE (TOTAL)	108 40-160	
Styrene	108 40-160	
Acetone	110 40-160	
Carbon disulfide	122 40-160	
2-Butanone	96 40-160	
Vinyl acetate	91 40-160	
4-Methyl-2-pentanone	99 40-160	
2-Hexanone	96 40-160	
Acrolein	103 40-160	
Acrylonitrile	123 40-160	
Surrogate(s)		
Pentafluorobenzene	101 80-120	
Fluorobenzene	106 80-120	
4-Bromofluorobenzene	99 80-120	
	or sample(s) 02 (WG297393-2)
Acenaphthene	72 46-118	
1,2,4-Trichlorobenzene	55 39-98	
2-Chloronaphthalene	64 40~140	
1,2-Dichlorobenzene	50 40-140	
1,4-Dichlorobenzene	48 36-97	
2,4-Dinitrotoluene	90 24-96	

Laboratory Job Number: L0714684

Parameter	% Recovery	QC Criteria
SVOC's by GC/MS 625 LCS fo	or sample(s) 02	(WC297393_2)
2,6-Dinitrotoluene	94	40-140
Fluoranthene	101	40-140
4-Chlorophenyl phenyl ether	80	40-140
n-Nitrosodi-n-propylamine	56	41-116
Butyl benzyl phthalate	100	40-140
Anthracene	87	40-140
Pyrene	101	26-127
P-Chloro-M-Cresol	69	
2-Chlorophenol	51	23-97
2-Nitrophenol	61	27-123
4-Nitrophenol		30-130
•	38	10-80
2,4-Dinitrophenol	68	30-130
Pentachlorophenol	79	9-103
Phenol	20	12-110
Surrogate(s)		
2-Fluorophenol	31	21-120
Phenol-d6	25	10-120
Vitrobenzene-d5	55	23-120
2-Fluorobiphenyl	60	43-120
2,4,6-Tribromophenol	85	10-120
l-Terphenyl-d14	93	33-120
Cyanide, Total SPIKE for sample Cyanide, Total	e(s) 02 (L071463 96	34-01, WG296864-4)
Nitrogen, Ammonia SPIKE for sam Nitrogen, Ammonia	ple(s) 01 (L0714 84	1684-01, WG297647-4) 75-125
	0.1	12-123
Phosphorus, Total SPIKE for sam		
Phosphorus, Total	100	80-120
Chemical Oxygen Demand SPIKE for se Chemical Oxygen Demand	ample(s) 01 (L07 89	714684-01, WG298484-3) 84-120
BOD, 5 day SPIKE for sample(: BOD, 5 day	s) 01 (L0714404- 161	-53, WG296900-3) 50-145
Oil & Grease, Hem-Grav SPIKE for so Oil & Grease, Hem-Grav	ample(s) 02 (L07 92	714684-02, WG298148-3) 78-114
Phenolics, Total SPIKE for samp. Phenolics, Total	le(s) 02 (L07146 92	534-01, WG297304-3) 77-124
Total Metals SPIKE for sample Aluminum, Total Antimony, Total Arsenic, Total	(s) 01 (L0714684 85 85 95	1-01, WG297945-2)

Laboratory Job Number: L0714684

Parameter	% Recovery QC	Criteria
Total Metals SPIKE for sampl	e(s) 01 (L0714684-0	1, WG297945-2)
Beryllium, Total	77	_,
Cadmium, Total	87	
Chromium, Total	75	
Copper, Total	78	
Lead, Total	83	
Nickel, Total	78	
Selenium, Total	87	
Silver, Total	82	
Thallium, Total	84	
Zinc, Total	84	
Total Metals SPIKE for sampl	e(s) 01 (L0714788-0	1, WG297559-2)
Mercury, Total	97	
Volatile Organics by GC/MS 624 SPIKE		
Methylene chloride		10-221
1,1-Dichloroethane Chloroform		59-155
•		51-138
Carbon tetrachloride		70-140
1,2-Dichloropropane		10-210
Dibromochloromethane		53-149
1,1,2-Trichloroethane		52-150
2-Chloroethylvinyl ether		10-305
Tetrachloroethene		64-148
Chlorobenzene		37-160
Trichlorofluoromethane		17-181
1,2-Dichloroethane		49-155
1,1,1-Trichloroethane		52-162
Bromodichloromethane		35-155
trans-1,3-Dichloropropene		17-183
cis-1,3-Dichloropropene		10-227
Bromoform		45-169
1,1,2,2-Tetrachloroethane		46-157
Benzene 		35-151
Toluene	89	47-150
Ethylbenzene		37-162
Chloromethane		10-273
Bromomethane		10-242
Vinyl chloride		10-251
Chloroethane		14-230
1,1-Dichloroethene		10-234
trans-1,2-Dichloroethene		54-156
cis-1,2-Dichloroethene	86	60-140
Trichloroethene	95	71–157
1,2-Dichlorobenzene	82	18-190
1,3-Dichlorobenzene	79	59-156
1,4-Dichlorobenzene	83	18-190
p/m-Xylene		40-160

Laboratory Job Number: L0714684

Parameter	% Recovery	QC Criteria
Volatile Organics by GC/MS 624 SPIK	E for sample(s) 02	-03 (L0714647-02, WG297075-1)
o-Xylene	83	40-160
XYLENE (TOTAL)	88	40-160
Styrene	84	40-160
Acetone	111	40-160
Carbon disulfide	98	40-160
2-Butanone	91	40-160
Vinyl acetate	84	40-160
4-Methyl-2-pentanone	101	40–160
2-Hexanone	100	40-160
Acrolein	97	40-160
Acrylonitrile	114	
ACTYLONICITIE	114	40-160
Surrogate(s)	2.7	0.0 1.00
Pentafluorobenzene	97	80-120
Fluorobenzene	102	80-120
4-Bromofluorobenzene	93	80-120
SVOC's by GC/MS 625 SPIKE for	sample(s) 02 (L07	14616-01, WG297393-3)
Acenaphthene	71	46-118
1,2,4-Trichlorobenzene	56	39-98
2-Chloronaphthalene	61	40-140
1,2-Dichlorobenzene	47	40-140
1,4-Dichlorobenzene	47	36-97
2,4-Dinitrotoluene	85	24-96
2,6-Dinitrotoluene	85	40-140
Fluoranthene	94	40-140
4-Chlorophenyl phenyl ether	80	40-140
n-Nitrosodi-n-propylamine	47	41-116
Butyl benzyl phthalate	94	40-140
Anthracene	85	40-140
Pyrene	94	26-127
P-Chloro-M-Cresol	73	23-97
2-Chlorophenol	52	27-123
2-Nitrophenol	56	30-130
4-Nitrophenol	61	10-80
2,4-Dinitrophenol	71	
Pentachlorophenol	80	30-130
Phenol	31	9-103 12-110
Surrogate(s)		
	4.0	01 100
2-Fluorophenol	40	21-120
Phenol-d6	39	10-120
Nitrobenzene-d5	50	23-120
2-Fluorobiphenyl	58	43-120
	91	20 100
2,4,6-Tribromophenol 4-Terphenyl-dl4	91 85	10-120 33-120

Laboratory Job Number: L0714684

PARAMETER	RESULT	UNITS	RDL	REF METHOD		TE	ID
					PREP	ANAL	
Blar	nk Analysis for	sample(s) O	1 (WG2970	53-1)			
Solids, Total Suspende	_	mg/l	5.0	30 2540D		1008 09:00) DW
Blar	ık Analysis for	sample(s) 0	2 (WG2968)	64-1)			
Cyanide, Total	ND	mg/l	0.005	30 4500CN-CE	1005 10:45	1005 16:58	B DE
	nk Analysis for			47-1)			
Nitrogen, Ammonia	ND	mg/l	0.400	30 4500NH3~BE		1011 13:06	JI.
	nk Analysis for	-		·			
Phosphorus, Total	ND	mg/l	0.01	30 4500P-E		1010 15:00) HS
Blar Chemical Oxygen Demano	nk Analysis for ND	sample(s) 0	1 (WG2984) 20.	84-1) 30 5220D		1010 07 07	\ ~·-
onemical oxygen behand	K D	ng/ ±	20.	30 52200		1018 07:30	אט (
Blan BOD, 5 day	nk Analysis for ND	sample(s) 0	1 (WG29690 2.0	00-1) 30 5210B	1005 12.50	1010 12:00) Est
bob, 5 day	14.0	nig/ ±	2.0	30 3210B	1005 12:50	1010 12:00	, in
Blan Oil & Grease, Hem-Grav	nk Analysis for ND	sample(s) 0	2 (WG2981	48-1) 74 1664A	1015 13 00	1016 10 1	
orr a dreade, nem ora	1142	111g/ ±	1.0	74 1004A	1015 15:00	1016 13:15	3 1/1
Blan Phenolics, Total	nk Analysis for ND	sample(s) 0	2 (WG2973) 0.03	04-1)		7000 00.30	
	nk Analysis for					1009 09:30	A
Total Metals	ik Analysis für	sampre/s/ o	I (WG2373	19 200.7			
Aluminum, Total Antimony, Total	ND ND	mg/l	0.10 0.050	19 200.7		1016 13:16	
Arsenic, Total	ND	mg/l mg/l	0.005	19 200.7		1016 13:16	
Beryllium, Total	ND	mg/l	0.005	19 200.7 19 200.7		1016 13:16 1016 13:16	
Cadmium, Total	ND	mg/l	0.005	19 200.7		1016 13:16	
Chromium, Total	ND	mg/l	0.003	19 200.7		1016 13:16	
Copper, Total	ND	mg/l	0.010	19 200.7		1016 13:16	
Lead, Total	ND	mg/l	0.010	19 200.7		1016 13:16	
Nickel, Total	ND	mg/1	0.025	19 200.7		1016 13:16	
Selenium, Total	ND	mg/l	0.010	19 200.7		1016 13:16	
Silver, Total	ND	mg/l	0.007	19 200.7		1016 13:16	
Thallium, Total	ND	mg/l	0.020	19 200.7		1016 13:16	

Laboratory Job Number: L0714684

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE II
					PREP ANAL
Blank An	alysis for sa	ample/e/ O	1 /版で207	559_41	
Fotal Metals	21,010 101 0	ampic(s) o.	I (MG237.	339-4)	
Mercury, Total	ND	mg/l	0.000	2 3 245.1	1010 18:00 1011 12:29 RC
Blank Anal	ysis for sam	ple(s) 02-0	D3 (WG29	7075-6)	
Volatile Organics by GC/MS	624			5 624	1007 13:39 MM
Methylene chloride	ND	ug/l	5.0		
l,1-Dichloroethane	ND	ug/l	1.5		
Chloroform	ND	ug/l	1.5		
Carbon tetrachloride	ND	ug/l	1.0		
l,2-Dichloropropane	ND	ug/l	3.5		
Dibromochloromethane	ND	ug/l	1.0		
1,1,2-Trichloroethane	ND	ug/l	1.5		
Tetrachloroethene	ND	ug/l	1.5		
Chlorobenzene	ND	ug/l	3.5		
Trichlorofluoromethane	ND	ug/l	5.0		
l,2-Dichloroethane	ND	ug/l	1.5		
l,1,1-Trichloroethane	ND	ug/l	2.0		
Bromodichloromethane	ND	ug/l	1.0		
rans-1,3-Dichloropropene	ND	ug/l	1.5		
cis-1,3-Dichloropropene	ND	ug/l	1.5		
Bromoform	ND	ug/l	1.0		
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0		
Benzene	ND	ug/l	1.0		
l'oluene	ND	ug/l	1.0		
Ethylbenzene	ND	ug/l	1.0		
Chloromethane	ND	ug/l	10.		
Bromomethane	ND	ug/l	5.0		
Vinyl chloride	ND	ug/l	2.0		
Chloroethane	ND	ug/l	2.0		
l,1-Dichloroethene	ND	ug/1	1.0		
trans-1,2-Dichloroethene	ND	ug/l	1.5		
cis-1,2-Dichloroethene	ND	ug/l	1.0		
Trichloroethene	ND	ug/l	1.0		
l,2-Dichlorobenzene	ND	ug/l	5.0		
1,3-Dichlorobenzene	ND	ug/l	5.0		
l,4-Dichlorobenzene	ND	ug/l	5.0		
o/m-Xylene	ND	ug/l	2.0		
o-xylene	ND	ug/l	1.0		
Kylene (Total)	ND	ug/l	2.0		
Styrene	ND	ug/l	1.0		
Acetone	ND	ug/l	10.		
Carbon disulfide	ND	ug/l	5.0		
2-Butanone	ND	ug/l	10.		
Vinyl acetate	ND	ug/l	20.		
4-Methyl-2-pentanone	ND	ug/l	10.		
2-Hexanone	ND	ug/l	10.		

Laboratory Job Number: L0714684

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE ID PREP ANAL
Blank Analys	is for samr	nle(s) 02-03	1 (WG29	7075-61	·
Volatile Organics by GC/MS 6		/IC(B) 02 00	, (1102)	5 624	1007 13:39 MM
Acrolein	ND	ug/l	8.0	J 024	1007 13.39 141
Acrylonitrile	ND	ug/l	10.		
Methyl Acetate	ND	ug/l	20.		
Ethyl Acetate	ND	ug/l	20.		
Tetrahydrofuran	ND	ug/l	20.		
Acetonitrile	ND	ug/l	40.		
n-Hexane	ND	ug/l	20.		
Isopropyl Ether	ND	ug/l	20.		
Cyclohexane	ND	ug/l	20.		
Heptane	ND	ug/l	20.		
Butyl Acetate	ND	=	20.		
Methyl tert butyl ether	ND	ug/l	20.		
Ethyl Ether	ND	ug/l	20.		
Dibromomethane		ug/l			
DIDI ONOME CHAME	ND	ug/l	20.		
Surrogate(s)	Recovery		00.02	iteria	
Pentafluorobenzene	100	96	80-12		
Fluorobenzene	109	5 9	80-12		
4-Bromofluorobenzene	98.0	9 8	80-12		
Acenaphthene	ND	ug/l	5.0	5 625	1009 17:00 1018 07:35 PS
SVOC's by GC/MS 625	MD	(1	F 0	5 625	1009 17:00 1018 07:35 PS
Benzidine	ND	ug/l	50.		
1,2,4-Trichlorobenzene	ND	ug/l	5.0		
Hexachlorobenzene	ND	ug/l	5.0		
Bis(2-chloroethyl)ether	ND	ug/l	5.0		
2-Chloronaphthalene	ND	ug/l	6.0		
1,2-Dichlorobenzene	ND	ug/l	5.0		
1,3-Dichlorobenzene	ND	ug/l	5.0		
1,4-Dichlorobenzene	ND	ug/l	5.0		
3,3'-Dichlorobenzidine	ND	ug/l	50.		
2,4-Dinitrotoluene	ND	ug/l	6.0		
2,6-Dinitrotoluene	ND	ug/1 ug/1	5.0		
Azobenzene	ND	ug/l ug/l	5.0		
Fluoranthene	ND		5.0		
ao a diferienc		ug/l	5.0		
4-Chlorophenyl phonyl other					
	ND	ug/l	E /		
4-Bromophenyl phenyl ether	ND	ug/l	5.0		
4-Bromophenyl phenyl ether Bis(2-chloroisopropyl)ether	ND ND	ug/l ug/l	5.0		
4-Bromophenyl phenyl ether Bis(2-chloroisopropyl)ether Bis(2-chloroethoxy)methane	ND ND ND	ug/l ug/l ug/l	5.0 5.0		
4-Bromophenyl phenyl ether Bis(2-chloroisopropyl)ether Bis(2-chloroethoxy)methane Hexachlorobutadiene	ND ND ND ND	ug/l ug/l ug/l ug/l	5.0 5.0 10.		
4-Bromophenyl phenyl ether Bis(2-chloroisopropyl)ether Bis(2-chloroethoxy)methane Hexachlorobutadiene Hexachlorocyclopentadiene	ND ND ND ND ND	ug/1 ug/1 ug/1 ug/1 ug/1	5.0 5.0 10. 30.		
4-Bromophenyl phenyl ether Bis(2-chloroisopropyl)ether Bis(2-chloroethoxy)methane Hexachlorobutadiene Hexachlorocyclopentadiene Hexachloroethane	ND ND ND ND ND ND	ug/l ug/l ug/l ug/l ug/l ug/l	5.0 5.0 10. 30. 5.0		
4-Bromophenyl phenyl ether Bis(2-chloroisopropyl)ether Bis(2-chloroethoxy)methane Hexachlorobutadiene Hexachlorocyclopentadiene Hexachloroethane Isophorone	ND ND ND ND ND ND ND	ug/l ug/l ug/l ug/l ug/l ug/l ug/l	5.0 5.0 10. 30. 5.0 5.0		
4-Chlorophenyl phenyl ether 4-Bromophenyl phenyl ether Bis(2-chloroisopropyl)ether Bis(2-chloroethoxy)methane Hexachlorobutadiene Hexachlorocyclopentadiene Hexachloroethane Isophorone Naphthalene Nitrobenzene	ND ND ND ND ND ND	ug/l ug/l ug/l ug/l ug/l ug/l	5.0 5.0 10. 30. 5.0		

Laboratory Job Number: L0714684

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE ID PREP ANAL
	sis for	sample(s) 02	2 (WG297		
SVOC's by GC/MS 625 cont'd				5 625	1009 17:00 1018 07:35 PS
NDPA/DPA	ND	ug/l	15.		
n-Nitrosodi-n-propylamine	ND	ug/l	5.0		
Bis(2-ethylhexyl)phthalate	ND	ug/l	5.0		
Butyl benzyl phthalate	ND	ug/l	5.0		
Di-n-butylphthalate	ND	ug/l	5.0		
Di-n-octylphthalate	ND	ug/l	5.0		
Diethyl phthalate	ND	ug/l	5.0		
Dimethyl phthalate	ND	ug/l	5.0		
Benzo(a)anthracene	ND	ug/l	5.0		
Benzo(a)pyrene	ND	ug/l	5.0		
Benzo(b)fluoranthene	ND	ug/l	5.0		
Benzo(k)fluoranthene	ND	ug/l	5.0		
Chrysene	ND	ug/l	5.0		
Acenaphthylene	ND	ug/l	5.0		
Anthracene	ND	ug/l	5.0		
Benzo(ghi)perylene	ND	ug/l	5.0		
Fluorene	ND	ug/l	5.0		
Phenanthrene	ND	ug/l	5.0		
Dibenzo(a,h)anthracene	ND	ug/l	5.0		
Indeno(1,2,3-cd)pyrene	ND	ug/l	7.0		
Pyrene	ND	ug/l	5.0		
Aniline	ND	ug/l	20.		
4-Chloroaniline	ND	ug/l	5.0		
l-Methylnaphthalene	ND	ug/l	5.0		
2-Nitroaniline	ND	uq/l	5.0		
3-Nitroaniline	ND	ug/l	5.0		
4-Nitroaniline	ND	ug/l	7.0		
Dibenzofuran	ND	ug/l	5.0		
2-Methylnaphthalene	ND	ug/l	5.0		
n-Nitrosodimethylamine	ND	ug/l	50.		
2,4,6-Trichlorophenol	ND	ug/l	5.0		
p-Chloro-m-cresol	ND	ug/l	5.0		
2-Chlorophenol	ND	ug/l	6.0		
2,4-Dichlorophenol	ND	ug/l	10.		
2,4-Dimethylphenol	ND	ug/l	10.		
2-Nitrophenol	ND	ug/l	20.		
4-Nitrophenol	ND	ug/l	10.		
2,4-Dinitrophenol	ND	ug/l	30.		
4,6-Dinitro-o-cresol	ND	ug/l	20.		
Pentachlorophenol	ND	ug/1 ug/1	10.		
Phenol	ND	-			
		ug/l	7.0		
2-Methylphenol // Methylphenol	ND	ug/l	6.0		
3-Methylphenol/4-Methylphenol		ug/1	6.0		
2,4,5-Trichlorophenol	ND	ug/l	5.0		
2,6-Dichlorophenol	ND	ug/l	10.		
Benzoic Acid	ND	ug/l	50.		

Laboratory Job Number: L0714684

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE I PREP ANAL
				-	PREP ANAL
Blank A	nalysis for s	ample(s) 0:	2 (WG297	393-1)	
SVOC's by GC/MS 625 cont'	d			5 625	1009 17:00 1018 07:35 P
Benzyl Alcohol	ND	ug/l	10.		
Carbazole	ND	ug/l	5.0		
Surrogate(s)	Recovery		QC Cr	iteria	
2-Fluorophenol	33.0	96	21-12	0	
Phenol-d6	26.0	og o	10-12	0	
Nitrobenzene-d5	54.0	95	23-12	0	
2-Fluorobiphenyl	47.0	લ	43-12	0	
2,4,6-Tribromophenol	79.0	g _o	10-12	0	
4-Terphenyl-d14	88.0	90	33-12	0	

ALPHA ANALYTICAL LABORATORIES ADDENDUM I

REFERENCES

- 3. Methods for the Determination of Metals in Environmental Samples, Supplement I. EPA/600/R-94/111. May 1994.
- Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020. Revised March 1983.
- 5. Methods for the Organic Chemical Analysis of Municipal and Industrial Wastewater. Appendix A, Part 136, 40 CFR (Code of Federal Regulations).
- 19. Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.
- 30. Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition, 1992.
- 74. Method 1664, Revision A: N-Hexane Extractable Material (HEM; Oil & Grease) and Silica Gel Treated N-Hexane Extractable Material (SGT-HEM; Non-polar Material) by Extraction and Gravimetry, EPA-821-R-98-002, February 1999.

GLOSSARY OF TERMS AND SYMBOLS

REF Reference number in which test method may be found.

METHOD Method number by which analysis was performed.

ID Initials of the analyst.

ND Not detected in comparison to the reported detection limit.

NI Not Ignitable.

ug/cart Micrograms per Cartridge.

H The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

LIMITATION OF LIABILITIES

Alpha Analytical, Inc. performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical, Inc., shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical, Inc. be held liable for any incidental consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical, Inc.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding times and splitting of samples in the field.

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ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive Westborough, Massachusetts 01581-1019 (508) 898-9220 www.alphalab.com

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

CERTIFICATE OF ANALYSIS

Laboratory Job Number: L0705021 Client: Rohm & Haas

Address: 455 Forest Street

Date Received: 11-APR-2007 Marlboro, MA 01752

Mr. Keith LeMaire Date Reported: 25-APR-2007 Attn:

Delivery Method: Client Project Number:

SEMIANNUAL (APRIL) Site:

ALPHA SAMPLE NUMBER CLIENT IDENTIFICATION SAMPLE LOCATION ATC-NS02 L0705021-01 COMP L0705021-02 GRAB ATC-NS02 L0705021-03 TRIP BLANK ATC-NSO2

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized by: Technical Director

04250715:45 Page 1 of 24

ALPHA ANALYTICAL LABORATORIES NARRATIVE REPORT

Laboratory Job Number: L0705021

The samples were received in accordance with the chain of custody and no significant deviations were encountered during preparation or analysis unless otherwise noted below.

BOD-405

L0705021-01 has an elevated detection limit due to a 5x dilution required for analysis of higher BOD concentrations.

ALPHA ANALYTICAL LABORATORIES CERTIFICATE OF ANALYSIS

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number: L0705021-01

Condition of Sample: Satisfactory

Date Collected: 11-APR-2007 08:00

Field Prep: None

Date Received: 11-APR-2007 COMP

Date Reported: 25-APR-2007 Sample Matrix: WATER

Number & Type of Containers: 2-Amber, 4-Plastic

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DA'	re ii
					PREP	ANAL
Solids, Total Suspended	ND	mg/l	5.0	4 160.2		0417 15:20 DV
Nitrogen, Ammonia	1.42	mg/l	0.400	44 350.2		0419 22:09 но
Phosphorus, Total	0.13	mg/l	0.01	4 365.2		0416 15:00 н
Chemical Oxygen Demand	85	mg/l	20	44 410.4		0420 11:30 D
BOD, 5 day	78	mg/l	10	4 405.1	0412 08:40	0417 15:55 DR
Total Metals				19 200.7		
Antimony, Total	ND	mg/l	0.050	19 200.7	0412 17:45	0413 11:20 M
Arsenic, Total	ND	mg/l	0.005	19 200.7	0412 17:45	0413 11:20 M
Beryllium, Total	ND	mg/l	0.005	19 200.7		0413 11:20 M
Cadmium, Total	ND	mg/l	0.005	19 200.7		0413 11:20 M
Chromium, Total	ND	mg/l	0.01	19 200.7		0413 11:20 M
Copper, Total	0.014	mg/1	0.010	19 200.7		0413 11:20 M
Lead, Total	ND	mg/l	0.010	19 200.7		0413 31:20 M
Mercury, Total	ND	mg/l	0.0002	4 245.2		0420 15:12 H
Nickel, Total	ND	mg/l	0.025	19 200.7		0413 11:20 M
Selenium, Total	ND	mg/l	0.010	19 200.7		0413 11:20 M
Silver, Total	ND	mg/1	0.007	19 200.7		0413 11:20 M
Thallium, Total	ИД	mg/l	0.020	19 200.7		0413 11:20 M
Zinc, Total	ND	mg/l	0.050	19 200.7	0412 17:45	0413 11:20 M
SVOC's by GC/MS 625				5 625	0412 19:30	0425 12:33 R
Acenaphthene	ND	ug/l	4.8			
Benzidine	ND	ug/l	48.			
1,2,4-Trichlorobenzene	ИD	ug/l	4.8			
Hexachlorobenzene	ND	ug/l	4.8			
Bis(2-chloroethyl)ether	ND	ug/l	4.8			
2-Chloronaphthalene	ND	ug/l	5.8			
1,2-Dichlorobenzene	ND	ug/l	4.8			
1,3-Dichlorobenzene	ND	ug/l	4.8			
1,4-Dichlorobenzene	ND	ug/l	4.8			
3,3'-Dichlorobenzidine	ND	ug/l	48.			
2,4-Dinitrotoluene	ND	ug/1	5.8			
2,6-Dinitrotoluene	ND	ug/l	4.8			

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0705021-01

COMP

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE ID PREP ANAL
Market					FIREF ANALI
SVOC's by GC/MS 625 cont'd				5 625	0412 19:30 0425 12:33 RL
Azobenzene	ND	ug/l	4.8		
Fluoranthene	ND	ug/l	4.8		
4-Chlorophenyl phenyl ether	ND	ug/l	4.8		
4-Bromophenyl phenyl ether	ND	ug/l	4.8		
Bis(2-chloroisopropyl)ether	ND	ug/l	4.8		
Bis(2-chloroethoxy)methane	ND	ug/l	4.8		
Hexachlorobutadiene	ND	ug/l	9.6		
Hexachlorocyclopentadiene	ND	ug/l	29.		
Hexachloroethane	ND	ug/l	4.8		
Isophorone	ND	ug/l	4.8		
Naphthalene	ND	ug/l	4.8		
Nitrobenzene	ND	ug/l	4.8		
NDPA/DPA	ND	ug/l	14.		
n-Nitrosodi-n-propylamine	ND	ug/l	4.8		
Bis(2-ethylhexyl)phthalate	ND	ug/l	4.8		
Butyl benzyl phthalate	ND	ug/l	4.8		
Di-n-butylphthalate	ND	ug/l	4.8		
Di-n-octylphthalate	ND	ug/l	4.8		
Diethyl phthalate	ND	ug/l	4.8		
Dimethyl phthalate	ND	ug/l	4.8		
Benzo (a) anthracene	ND	ug/l	4.8		
Benzo(a)pyrene	ND	ug/l	4.8		
Benzo(b)fluoranthene	ND	ug/l	4.8		
Benzo(k)fluoranthene	ND	ug/1	4.8		
Chrysene	ND	ug/l	4.8		
Acenaphthylene	ND	ug/l	4.8		
Anthracene	ND	ug/l	4.8		
Benzo(ghi)perylene	ND	ug/l	4.8		
Fluorene	ND	ug/l	4.8		
Phenanthrene	ND	ug/l	4.8		
Dibenzo(a,h)anthracene	ND	ug/l	4.8		
Indeno(1,2,3-cd)pyrene	ND	ug/1	6.7		
Pyrene	ND	ug/l	4.8		
Aniline	ND	ug/l	19.		
4-Chloroaniline	ND	ug/l	4.8		
1-Methylnaphthalene	ND	ug/l	4.8		
2-Nitroaniline	ND	ug/1	4.8		
3-Nitroaniline	ND	ug/1	4.8		
4-Nitroaniline	ND	ug/l	6.7		
Dibenzofuran	ND	ug/l	4.8		
2-Methylnaphthalene	ND	ug/l	4.8		
n-Nitrosodimethylamine	ND	ug/l	48.		
2,4,6-Trichlorophenol	ND	ug/l	4.8		
p-Chloro-m-cresol	ND	ug/l	4.8		
2-Chlorophenol	ND	ug/l	5.8		
2,4-Dichlorophenol	ND	ug/1	9.6		
2,4-Dimethylphenol	ND	ug/l ug/l	9.6		
2-Nitrophenol	ND	ug/1 ug/1	19.		
=			9.6		
4-Nitrophenol	ND	ug/l	9.0		

 $\hbox{Comments: Complete list of References and Glossary of Terms found in Addendum } \\ I$

ALPHA ANALYTICAL LABORATORIES CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0705021-01

COMP

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DA	TE	ID
					PREP	ANAL	
SVOC's by GC/MS 625 cont'd				5 625	0412 19:30	0425 12:33	RL
2,4-Dinitrophenol	ND	ug/l	29.				
4,6-Dinitro-o-cresol	ND	ug/l	19.				
Pentachlorophenol	ND	ug/l	9.6				
Phenol	ND	ug/l	6.7				
2-Methylphenol	ND	ug/l	5.8				
3-Methylphenol/4-Methylphenol	ND	ug/l	5.8				
2,4,5-Trichlorophenol	ND	ug/l	4.8				
2,6-Dichlorophenol	ND	ug/l	9.6				
Benzoic Acid	ND	ug/l	48.				
Benzyl Alcohol	ND	ug/l	9.6				
Carbazole	ND	ug/l	4.8				
Surrogate(s)	Recovery		QC Cr.	iteria			
2-Fluorophenol	35.0	엉	21-12	0			
Phenol-d6	18.0	90	10-12	0			
Nitrobenzene-d5	76.0	8	23-12	0			
2-Fluorobiphenyl	59.0	90	43-12	0			
2,4,6-Tribromophenol	66.0	용	10-12	0			
4-Terphenyl-d14	87.0	ole Ole	33-12	0			

Comments: Complete list of References and Glossary of Terms found in Addendum ${\tt I}$

ALPHA ANALYTICAL LABORATORIES CERTIFICATE OF ANALYSIS

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number: L0705021-02

Date Collected: 11-APR-2007 08:00

GRAB

Date Received: 11-APR-2007

Sample Matrix: WATER Date Reported: 25-APR-2007

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 3-Amber, 1-Plastic, 2-Vial

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DA		ID
					PREP	ANAL	
Cyanide, Total	ND	mg/l	0.005	4 335.2	0412 16:00	0412 21:4	1 DD
Oil & Grease, Hem-Grav	ND	mg/l	4.4	74 1664A	0420 09:45	0423 13:3	0 AT
Phenolics, Total	ND	mg/l	0.03	4 420.1		0424 09:4	5 AT
Volatile Organics by GC/MS	624			5 624		0416 12:1) MM
Methylene chloride	ND	ug/l	5.0				
1,1-Dichloroethane	ND	ug/l	1.5				
Chloroform	3.8	ug/l	1.5				
Carbon tetrachloride	ND	ug/l	1.0				
1,2-Dichloropropane	ND	ug/l	3.5				
Dibromochloromethane	4.6	ug/l	1.0				
1,1,2-Trichloroethane	ND	ug/l	1.5				
2-Chloroethylvinyl ether	ND	ug/l	10.				
Tetrachloroethene	ND	ug/l	1.5				
Chlorobenzene	ND	ug/l	3.5				
Trichlorofluoromethane	ND	ug/l	5.0				
1,2-Dichloroethane	ND	ug/l	1.5				
1,1,1-Trichloroethane	ND	ug/l	2.0				
Bromodichloromethane	5.6	ug/l	1.0				
trans-1,3-Dichloropropene	ND	ug/l	1.5				
cis-1,3-Dichloropropene	ND	ug/l	1.5				
Bromoform	2.5	ug/1	1.0				
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0				
Benzene	ND	ug/1	1.0				
Toluene	ND	ug/l	1.0				
Ethylbenzene	ND	ug/l	1.0				
Chloromethane	ND	ug/l	10.				
Bromomethane	ND	ug/l	5.0				
Vinyl chloride	ND	ug/l	2.0				
Chloroethane	ND	ug/l	2.0				
1,1-Dichloroethene	ND	ug/l	1.0				
trans-1,2-Dichloroethene	ND	ug/l	1.5				
cis-1,2-Dichloroethene	ND	ug/l	1.0				
Trichloroethene	ND	ug/l	1.0				
1,2-Dichlorobenzene	ND	ug/l	5.0				
1,3-Dichlorobenzene	ND	ug/l	5.0				
1,4-Dichlorobenzene	ND	ug/l	5.0				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0705021-02

GRAB

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DA	DATE	ID
					PREP	ANAL	_
Volatile Organics by GC/M	IS 624 cont'd			5 624		0416 12:1	11 MM
p/m-Xylene	ND	ug/l	2.0				
o-xylene	ND	ug/l	1.0				
Xylene (Total)	ND	ug/l	2.0				
Styrene	ND	ug/l	1.0				
Acetone	16	ug/l	10				
Carbon disulfide	ND	ug/l	5.0				
2-Butanone	ND	ug/l	10.				
Vinyl acetate	ND	ug/l	20.				
4-Methyl-2-pentanone	ND '	ug/l	10.				
2-Hexanone	ND	ug/l	10.				
Acrolein	ND	ug/l	8.0				
Acrylonitrile	ND	ug/l	10.				
Surrogate(s)	Recovery		QC Cx	riteria			
Pentafluorobenzene	86.0	o _{lo}	80-12	20			
Fluorobenzene	97.0	왕	80-12	20			
4-Bromofluorobenzene	100	8	80-12	20			

ALPHA ANALYTICAL LABORATORIES CERTIFICATE OF ANALYSIS

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number: L0705021-03

Date Collected: 05-APR-2007 15:45

TRIP BLANK Date Received: 11-APR-2007 Date Reported: 25-APR-2007 WATER

Field Prep: None Condition of Sample: Satisfactory

Number & Type of Containers: 1-Vial

Sample Matrix:

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE ID PREP ANAL
Volatile Organics by GC/MS	624			5	624	0416 J2:46 MM
Methylene chloride	ND	ug/l	5.0			
1,1-Dichloroethane	ND	ug/l	1.5			
Chloroform	ND	ug/l	1.5			
Carbon tetrachloride	ND	ug/l	1.0			
1,2-Dichloropropane	ND	ug/l	3.5			
Dibromochloromethane	ND	ug/l	1.0			
1,1,2-Trichloroethane	ND	ug/l	1.5			
2-Chloroethylvinyl ether	ND	ug/l	10.			
Tetrachloroethene	ND	ug/l	1.5			
Chlorobenzene	ND	ug/l	3.5			
Trichlorofluoromethane	ND	ug/l	5.0			
1,2-Dichloroethane	ND	ug/l	1.5			
1,1,1-Trichloroethane	ND	ug/l	2.0			
Bromodichloromethane	ND	ug/l	1.0			
trans-1,3-Dichloropropene	ND	ug/l	1.5			
cis-1,3-Dichloropropene	ND	ug/l	1.5			
Bromoform	ND	ug/l	1.0			
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0			
Benzene	ND	ug/l	1.0			
Toluene	ND	ug/l	1.0			
Ethylbenzene	ND	ug/l	1.0			
Chloromethane	ND	ug/l	10.			
Bromomethane	ND	ug/l	5.0			
Vinyl chloride	ND	ug/l	2.0			
Chloroethane	ND	ug/l	2.0			
1,1-Dichloroethene	ND	ug/l	1.0			
trans-1,2-Dichloroethene	ND	ug/l	1.5			
cis-1,2-Dichloroethene	ND	ug/l	1.0			
Trichloroethene	ND	ug/l	1.0			
1,2-Dichlorobenzene	ND	ug/l	5.0			
1,3-Dichlorobenzene	ND	ug/l	5.0			
1,4-Dichlorobenzene	ND	ug/l	5.0			
p/m-Xylene	ND	ug/l	2.0			
o-xylene	ND	ug/l	1.0			
Xylene (Total)	ND	ug/l	2.0			
Styrene (10cd1)	ND	ug/l	1.0			
Acetone	ND	ug/1	10.			
Carbon disulfide	ND	ug/l	5.0			

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0705021-03

TRIP BLANK

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP AI	ID VAL
- A Larry						
Volatile Organics by GC/MS	624 cont'd			5 624	0416	12:46 MM
2-Butanone	ND	ug/l	10.			
Vinyl acetate	ND	ug/l	20.			
4-Methyl-2-pentanone	ND	ug/l	10.			
2-Hexanone	ND	ug/l	10.			
Acrolein	ND	ug/l	8.0			
Acrylonitrile	ND	ug/l	10.			
Surrogate(s)	Recovery		QC Cr	riteria		
Pentafluorobenzene	83.0	ę	80-12	:0		
Fluorobenzene	92.0	90	80-12	.0		
4-Bromofluorobenzene	104	96	80-12	.0		

Comments: Complete list of References and Glossary of Terms found in Addendum ${\tt I}$

Laboratory Job Number: L0705021

Parameter	\$1°	Value 1	Value 2	Units	RPD	RPD Limits
Sol	ids. Total	Suspended f	or sample(s)	01 (L0705	5030-01,	WG277050-2)
Solids, Total Susp		470	460	mg/l	2	20
	Cyanide, T	otal for sa	mple(s) 02 (L0705021-0)2, WG276	5569-4)
Cyanide, Total		ND	ND	mg/l	NC	30
	Nitrogen, A	mmonia for	sample(s) 01	(L070535	7-01, WG2	277441-4)
Nitrogen, Ammonia		2.10	2.07	mg/l	1	20
	Phosphorus,	Total for	sample(s) 01	(L070505	2-04, WG2	276945-3)
Phosphorus, Total	•	0.17	0.17	mg/l	0	20
Che	emical Oxyge	en Demand fo	r sample(s)	01 (L0705	434-07, V	NG277477-4)
Chemical Oxygen De		27	34	mg/l	23	
	BOD, 5 (day for samp	ole(s) 01 (L0	705048-01	, WG27649	96-4)
BOD, 5 day		150	160	mg/l	6	35
Oi	l & Grease,	Hem-Grav fo	or sample(s)	02 (L0704	932-02, 1	WG277544-4)
Oil & Grease, Hem		6.8	7.3	mg/l	7	18
	Phenolics,	Total for s	sample(s) 02	(L0705161	-01, WG2	77864-4)
Phenolics, Total		ND	ND	mg/l	NC	12
	Total Me	tals for san	mple(s) 01 (L0704968-0	3, WG276	648-1)
Arsenic, Total		ND	ND	mg/1	NC	
Cadmium, Total		ND	ND	mg/l	ИС	
Chromium, Total		ND	ИD	mg/l	NС	
Copper, Total		ND	ND	mg/l	NC	
Lead, Total		ND	ND	mg/l	NC	
Nickel, Total		ND	ND	mg/l	NC	
Silver, Total		ND	ND	mg/l	NC	
Zinc, Total		ND	ND	mg/l	NC	
	Total Me	tals for sa	mple(s) 01 (L0705021-C)1, WG277	428-3)
Mercury, Total		ND	ND	mg/l	ИС	
Volatil	e Organics.	by GC/MS 62	4 for sample	(s) 02-03	(L070514	2-02, WG277103-2)
Methylene chloric		ND	ND	ug/l	ИС	30
1,1-Dichloroethar		ND	ИD	ug/l	NC	30
Chloroform		ND	ND	ug/l	NC	30
Carbon tetrachlor	ride	ND	ND	ug/l	NC	30
1,2-Dichloropropa		ND	ND	ug/l	NC	30
Dibromochlorometh		ИD	ND	ug/l	NC	30
1,1,2-Trichloroet		ND	ND	ug/l	NC	30
		ND	ND	ug/l	NC	30
2~Chloroethylviny					NC	30
2-Chloroethylving Tetrachloroethene	2	ND	ND	ug/l	140	
	5	ND ND	ND ND	ug/1 ug/l	NC	30 30

Laboratory Job Number: L0705021

Parameter	Value	1	Value 2	Units	RPD	RPD	Limits
Volatile Organics b	v GC/MS	624	for sample	(s) 02~03	(T.070514	12-02. U	√G277103-2)
1,2-Dichloroethane	ND	02.1	ND	uq/l	NC	30	,
1.1.1-Trichloroethane	ND		ND	ug/l	NC	30	
Bromodichloromethane	ND		ND	ug/l	NC	30	
trans-1,3-Dichloropropene	ND		ND	ug/l	NC	30	
cis-1,3-Dichloropropene	ND		ND	ug/l	NC	30	
Bromoform	ND		ND	ug/l	NC	30	
1,1,2,2-Tetrachloroethane	ND		ND	ug/l	NC	30	
Benzene	ND		ND	ug/l	NC	30	
Toluene	ND		ND	ug/l	NC	30	
Ethylbenzene	ND		ND	ug/l	NC	30	
Chloromethane	ND		ND	ug/l	NС	30	
Bromomethane	ND		ND	ug/l	NC	30	
Vinyl chloride	ND		ND	ug/l	NC	30	
Chloroethane	ND		ND	ug/l	NC	30	
1,1-Dichloroethene	ND		ND	ug/l	NC	30	
trans-1,2-Dichloroethene	ND		ND	ug/l	NC	30	
cis-1,2-Dichloroethene	ND		ND	uq/l	NC	30	
Trichloroethene	ND		ND	ug/l	NC	30	
1,2-Dichlorobenzene	ND		ND	ug/l	NC	30	
1,3-Dichlorobenzene	ND		ND	ug/l	NC	30	
1,4-Dichlorobenzene	ND		ND	ug/l	NC	30	
p/m-Xylene	ND		ND	ug/l	NС	30	
o-xylene	ND		ND	ug/l	NC	30	
Xylene (Total)	ND		ND	ug/l	NC	30	
Styrene	ND		ND	ug/l	NC	30	
Acetone	ND		ND	ug/l	NC	30	
Carbon disulfide	ND		ND	ug/l	NC	30	
2-Butanone	ND		ND	ug/l	NC	30	
Vinyl acetate	ND		ND	ug/l	NC	30	
4-Methyl-2-pentanone	ND		ND	ug/l	NC	30	
2-Hexanone	ND		ND	ug/l	NC	30	
Acrolein	ND		ND	ug/l	NC	30	
Acrylonitrile	ND		ND	ug/l	NC	30	
Methyl tert butyl ether	ND		ND	ug/l	NC	30	
1,4-Dioxane	ND		ND	ug/l	NC	30	
Tert-Butyl Alcohol	130		100	ug/l	26	30	
Tertiary-Amyl Methyl Ether	ND		ND	ug/l	NC	30	
Surrogate(s)		Reco	overy				QC Critería
Pentafluorobenzene	85.0		89.0	g _e			80-120
Fluorobenzene	97.0		100	9			80-120
4-Bromofluorobenzene	96.0		102	96			80-120
SVOC's by G	C/MS 625	for	r sample(s)		023-01,		9-4)
Acenaphthene	ND		ИD	ug/l	NC	30	
Benzidine	ND		ND	ug/l	NC	30	
1,2,4-Trichlorobenzene	ND		ND	ug/l	NC	30	
Hexachlorobenzene	ND		ND	ug/l	NC	30	

Laboratory Job Number: L0705021

Parameter	Value 1	Value 2	Units	RPD	RPD Limits
SVOC's hy	GC/MS 625 for	sample(s)	01 (1.07050	23-01.	WG276609-4)
Bis(2-chloroethyl)ether	ND	ND	ug/1	NC NC	30
2-Chloronaphthalene	ND	ND	ug/1	NC	30
1,2-Dichlorobenzene	ND	ND	ug/l	NC	30
1,3-Dichlorobenzene	ND	ND	ug/l	NC	30
1,4-Dichlorobenzene	ND	ND	ug/l	NC	30
3,3'-Dichlorobenzidine	ND	ND	ug/l	NC	30
2,4-Dinitrotoluene	ND	ND	ug/l	NC	30
2,6-Dinitrotoluene	ND	ND	ug/l	NC	30
Azobenzene	ND	ND	ug/l	NC	30
Fluoranthene	ND	ND	ug/l	NC	30
H-Chlorophenyl phenyl ether		ND	ug/l	NC	30
4-Bromophenyl phenyl ether	ND	ND	ug/l	NC	30
Bis(2-chloroisopropyl)ether		ND	ug/l	NC	30
3is(2-chlorotsopropy1/ether 3is(2-chloroethoxy)methane	ND	ND	ug/1	NC	30
Hexachlorobutadiene	ND	ND	ug/l	NC	30
Hexachlorocyclopentadiene	ND	ND	ug/l	NC	30
Hexachloroethane	ND	ND	ug/l	NC	30
Isophorone	ND	ND	ug/l	NC	30
Naphthalene	ND	ND	ug/l	NC	30
Nitrobenzene	ND	ND	ug/l	NC	30
NDPA/DPA	ND	ND	ug/l	NC	30
n-Nitrosodi-n-propylamine	ND	ND	ug/l	NC	30
Bis(2-ethylhexyl)phthalate	ND	ND	ug/l	NC	30
Butyl benzyl phthalate	7.4	12	ug/l	47	30
Di-n-butylphthalate	ND	ND	ug/l	NC	30
Di-n-octylphthalate	ND	ND	ug/l	NC	30
Diethyl phthalate	ND	ND	ug/l	NC	30
Dimethyl phthalate	ND	ND	ug/l	NC	30
Benzo(a) anthracene	ND	ND	ug/1	NС	30
Benzo(a)pyrene	ND	ND	ug/l	NC	30
Benzo(b) fluoranthene	ND	ND	ug/l	NC	30
Benzo(k)fluoranthene	ND	ND	ug/l	NC	30
Chrysene	ND	ИD	ug/l	NC	30
Acenaphthylene	ND	ND	ug/l	NC	30
Anthracene	ND	ND	ug/l	NC	30
Benzo(ghi)perylene	ND	ND	ug/l	NC	30
Fluorene	ND	ND	ug/l	NC	30
Phenanthrene	ND	ND	ug/l	ИС	30
Dibenzo(a,h)anthracene	ND	ND	ug/l	NC	30
Indeno(1,2,3-cd)pyrene	ND	ND	ug/l	NC	30
Pyrene	ND	ND	ug/l	NC	30
n-Nitrosodimethylamine	ND	ND	ug/l	NC	30
2,4,6-Trichlorophenol	ND	ND	ug/l	NC	30
p-Chloro-m-cresol	ND	ND	ug/l	NC	30
2-Chlorophenol	ND	ND	ug/l	NC	30
2,4-Dichlorophenol	ND	ND	ug/l	NC	30
2,4-Dimethylphenol	ND	ND	ug/l	NC	30
2-Nitrophenol	ND	ND	ug/l	NC	30

Laboratory Job Number: L0705021

Parameter	Value	1 Value 2	Units	RPD	RPD I	Limits
evocte by	CC/MS 625	for sample(s) 01 (L0705	5023-01	мс276609-	-4)
4-Nitrophenol	ND	ND	uq/l	NC	30	1,
2,4-Dinitrophenol	ND	ND	ug/l	NC	30	
4,6-Dinitro-o-cresol	ND	ND	ug/l	NC	30	
•	ND ND	ND	ug/l	NC	30	
Pentachlorophenol		ND	_	NC	30	
Phenol	ND		ug/1		30	
2-Methylphenol	ND	ND	ug/l	NC		
3-Methylphenol/4-Methylphen	nol ND	ND	ug/l	NC	30	
Surrogate(s)	R	lecovery				QC Criteria
2-Fluorophenol	51.0	69.0	96			21-120
Phenol-d6	55.0	89.0	8			10-120
Nitrobenzene-d5	96.0	101	90			23-120
2-Fluorobiphenyl	85.0	79.0	90			43-120
2,4,6-Tribromophenol	95.0	92.0	90			10-120
4-Terphenyl-d14	100	97.0	90			33-120

Laboratory Job Number: L0705021

Parameter		% Recovery	QC Criteria
(Cyanide, Total LCS for	sample(s) 02 (Wo	G276569-1)
Cyanide, Total		96	90-110
Nii	trogen, Ammonia LCS for	sample(s) 01 (WG277441-2)
Nitrogen, Ammonia	3	93	80-120
Pho	osphorus, Total LCS for		
Phosphorus, Total	1	103	85-115
Chem Chemical Oxygen	ical Oxygen Demand LCS Demand	for sample(s) 0	1 (WG277477-2)
	BOD, 5 day LCS for sa	mple(s) 01 (WG2	76496-2)
BOD, 5 day		90	85-115
Oil	& Grease, Hem-Grav LCS	for sample(s) 0	2 (WG277544-2)
Oil & Grease, He	m-Grav	88	78-114
	henolics, Total LCS for	-	
Phenolics, Total		92	82-111
	Total Metals LCS for s	sample(s) 01 (WG	276648-4)
Antimony, Total		95	
Arsenic, Total		98	
Beryllium, Total		102	
Cadmium, Total		101	
Chromium, Total		95	
Copper, Total		90	
Lead, Total		96	
Nickel, Total		94	
Selenium, Total		102	
Silver, Total		99	
Thallium, Total		97	
Zinc, Total		96	
	Total Metals LCS for	=	3277428-1)
Mercury, Total		102	
	Organics by GC/MS 624 L		
Methylene chlori		97	10-221
1,1-Dichloroetha	ine	111	59-155
		120	51-138
Chloroform	and do	125	70-140
Chloroform Carbon tetrachlo			
Chloroform Carbon tetrachlo 1,2-Dichloroprop	рапе	84	10-210
Chloroform Carbon tetrachlo 1,2-Dichloroprop Dibromochloromet	oane Chane	113	53-149
Chloroform Carbon tetrachlo 1,2-Dichloroprop Dibromochloromet 1,1,2-Trichloroe	oane chane ethane	113 102	53-149 52-150
Chloroform Carbon tetrachlo 1,2-Dichloroprop Dibromochloromet	oane chane ethane	113 102 70	53-149 52-150 10-305
Chloroform Carbon tetrachlo 1,2-Dichloroprop Dibromochloromet 1,1,2-Trichloroe	oane chane cthane nyl ether	113 102	53-149 52-150

Laboratory Job Number: L0705021

Parameter	% Recovery QC Criteria
Volatile Organics by GC/MS 6	24 LCS for sample(s) 02-03 (WG277103-3)
Trichlorofluoromethane	160 17-181
1.2-Dichloroethane	129 49-155
1,1,1-Trichloroethane	119 52-162
Bromodichloromethane	115 35-155
trans-1,3-Dichloropropene	86 17-183
cis-1,3-Dichloropropene	83 10-227
Bromoform	96 45-169
1,1,2,2-Tetrachloroethane	99 46-157
Benzene	98 37-151
Toluene	94 47-150
Ethylbenzene	100 37-162
Chloromethane	146 10-273
Bromomethane	118 10-242
Vinyl chloride	159 10-251
Chloroethane	123 14-230
1,1-Dichloroethene	103 10-234
trans-1,2-Dichloroethene	100 54-156
cis-1,2-Dichloroethene	96 60-140
Trichloroethene	81 71-157
1,2-Dichlorobenzene	91 18-190
1,3-Dichlorobenzene	85 59-156
1,4-Dichlorobenzene	94 18-190
p/m-Xylene	100 40-160
o-Xylene	91 40-160
XYLENE (TOTAL)	97 40-160
Styrene	83 40-160
Acetone	132 40-160
Carbon disulfide	111 40-160
2-Butanone	116 40-160
Vinyl acetate	113 40-160
4-Methyl-2-pentanone	87 40-160
2-Hexanone	101 40-160
Acrolein	71 40-160
Acrylonitrile	116 40-160
Surrogate(s)	25 20 100
Pentafluorobenzene	85 80-120
Fluorobenzene	97 80-120
4-Bromofluorobenzene	87 80-120
	LCS for sample(s) 01 (WG276609-2) 53 46-118
Acenaphthene	44 39-98
1,2,4-Trichlorobenzene	
2-Chloronaphthalene	51 40-140 43 40-140
1,2-Dichlorobenzene	42 36-97
1,4-Dichlorobenzene	75 24-96
2,4-Dinitrotoluene	78 40-140
2,6-Dinitrotoluene	/O 4U~14U

Laboratory Job Number: L0705021

SVOC's by GC/MS 625 LCS fo		
- · · · · · · · · · · · · · · · · · · ·	or sample(s) 0	1 (WG276609-2)
`luoranthene	83	40-140
-Chlorophenyl phenyl ether	58	40-140
-Nitrosodi-n-propylamine	43	41-116
Butyl benzyl phthalate	81	40-140
unthracene	65	40-140
	79	26-127
Pyrene		40-140
Mexachloropropene	42	
P-Chloro-M-Cresol	59	23-97
2-Chlorophenol	46	27-123
2-Nitrophenol	52	30-130
I-Nitrophenol	34	10-80
2,4-Dinitrophenol	62	30-130
Pentachlorophenol	58	9-103
Phenol	21	12-110
Gurrogate(s)		
2-Fluorophenol	32	21-120
Phenol-d6	30	10-120
Nitrobenzene-d5	56	23-120
2-Fluorobiphenyl	49	43-120
2,4,6-Tribromophenol	75	10-120
4-Terphenyl-d14	86	33-120
Cyanide, Total SPIKE for sample Cyanide, Total Nitrogen, Ammonia SPIKE for samp	102	80-120
Nitrogen, Ammonia	95	75–125
Phosphorus, Total SPIKE for sam	ple(s) 01 (L07	705052-06, WG276945-4)
Phosphorus, Total	98	80~120
Chemical Oxygen Demand SPIKE for sa Chemical Oxygen Demand	ample(s) 01 (I 96	L0705434-07, WG277477-3)
BOD, 5 day SPIKE for sample(s BOD, 5 day	s) 01 (L070504 110	48-02, WG276496-3) 50-145
Oil & Grease, Hem-Grav SPIKE for sa Oil & Grease, Hem-Grav	ample(s) 02 (1 89	L0704935-01, WG277544-3) 78-114
Phenolics, Total SPIKE for samp Phenolics, Total	ele(s) 02 (L070 94	05161-02, WG277864-3) 77-124
Total Metals SPIKE for sample	(s) 01 (L07049	968-03, WG276648-2)
	96	
ADTIMODY, TOTAL	~ ~	
Antimony, Total Arsenic, Total	98	

Laboratory Job Number: L0705021

Parameter	% Recovery QC Criteria	
Watel CRIVE for and	le(s) 01 (L0704968-03, WG276648-2)	
	98	
Cadmium, Total	90	
Chromium, Total	92	
Copper, Total	94	
Lead, Total		
Nickel, Total	91	
Selenium, Total	101	
Silver, Total	97	
Thallium, Total	96	
Zinc, Total	99	
Total Metals SPIKE for samp	le(s) 01 (L0705021-01, WG277428-2)	
Mercury, Total	1.18	
Volatile Organics by GC/MS 624 SPIKE	for sample(s) 02-03 (L0705142-02, WG277103-1)	
Methylene chloride	98 10-221	
1,1-Dichloroethane	115 59-155	
Chloroform	120 51-138	
Carbon tetrachloride	130 70-140	
1,2-Dichloropropane	87 10-210	
Dibromochloromethane	108 53-149	
1,1,2-Trichloroethane	104 52-150	
2-Chloroethylvinyl ether	62 10-305	
Tetrachloroethene	100 64-148	
Chlorobenzene	83 37-160	
Trichlorofluoromethane	166 17-181	
1,2-Dichloroethane	128 49-155	
1,1,1-Trichloroethane	120 52-162	
Bromodichloromethane	114 35-155	
trans-1,3-Dichloropropene	57 17–183	
cis-1,3-Dichloropropene	29 10-227	
Bromoform	88 45–169	
	98 46-157	
1,1,2,2-Tetrachloroethane	103 35-151	
Benzene	94 47-150	
Toluene	104 37-162	
Ethylbenzene	104 37-102	
Chloromethane		
Bromomethane	43 10-242	
Vinyl chloride	166 10-251	
Chloroethane	127 14-230	
1,1-Dichloroethene	102 10-234	
trans-1,2-Dichloroethene	98 54-156	
cis-1,2-Dichloroethene	96 60-140	
Trichloroethene	83 71–157	
1,2-Dichlorobenzene	93 18-190	
1,3-Dichlorobenzene	86 59–156	
1,4-Dichlorobenzene	94 18-190	
p/m-Xylene	104 40-160	
o-Xylene	94 40-160	

Laboratory Job Number: L0705021

Parameter	% Recovery	QC Criteria
Volatile Organics by GC/MS 624 SPIKE fo	an gample (g) 02	_02 (L0705142_02 WC277103-1)
volatile Organics by GC/MS 624 SPIRE 10 XYLENE (TOTAL)	101	40-160
	88	40-160
Styrene	125	40-160
Acetone	99	40-160
Carbon disulfide	113	40-160
2-Butanone	101	40-160
Vinyl acetate	86	40-160
4-Methyl-2-pentanone	95	40-160
2-Hexanone Acrolein	3	40-160
Acrylonitrile	112	40-160
ACTYTOHILLITE	1 1 2.	40 100
Surrogate(s)	90	80-120
Pentafluorobenzene	103	80-120
Fluorobenzene 4-Bromofluorobenzene	93	80-120
4-Bromoridorobenzene	93	00 120
SVOC's by GC/MS 625 SPIKE for sa		705023-01, WG276609-3) 46-118
Acenaphthene	85 75	39-98
1,2,4-Trichlorobenzene	75 89	40-140
2-Chloronaphthalene	66	40-140
1,2-Dichlorobenzene	66	36-97
1,4-Dichlorobenzene	89	24-96
2,4-Dinitrotoluene	1.10	40-140
2,6-Dinitrotoluene	99	40-140
Fluoranthene	89	40-140
4-Chlorophenyl phenyl ether n-Nitrosodi-n-propylamine	66	41-116
Butyl benzyl phthalate	100	40-140
	75	40-140
Anthracene Pyrene	94	26-127
Hexachloropropene	75	40-140
P-Chloro-M-Cresol	110	23-97
2-Chlorophenol	73	27-123
2-Nitrophenol	80	30-130
4-Nitrophenol	38	10-80
2,4-Dinitrophenol	85	30-130
Pentachlorophenol	78	9-103
Phenol	56	12-110
Surrogate(s)		
2-Fluorophenol	67	21-120
Phenol-d6	79	10-120
		23-120
	87	23-120
Nitrobenzene-d5	87 80	
	87 80 97	43-120 10-120

Laboratory Job Number: L0705021

PARAMETER		RESULT UNITS				RDL REF METHOD			DA	TE	ID
			~~~						PREP	ANAL	
elids, Total Suspe		Analysis ND	for	sample(s) mg/l	01	(WG27705 5.0		160.2		0417 15:2	0 DW
	31ank	-	for	sample(s)	02				0412 16:00	0410 01.0	6 DV
yanide, Total		ND		mg/l		0.005	4	335.2	0412 16:00	0412 21:2	e Dr
Ī	Blank	Analysis	for	sample(s)	01	(WG27744	1-1)				
itrogen, Ammonia		ИD		mg/l		0.400	44	350.2		0419 21:1	7 HG
3	Blank	` Analysis	for	sample(s)	01	(WG27694	5-1)				
Phosphorus, Total		ND		mg/l		0.01		365.2		0416 15:0	00 HS
;	Blank	Analysis	for	sample(s)	01	(WG27747	7-1)				
Chemical Oxygen De		ND		mg/l		20		410.4		0420 11:3	0 DV
	Blank	Analysis	for	sample(s)	01	(WG27649	96-1)				
30D, 5 day		ND		mg/l		2.0		405.1	0412 08:40	0417 15:5	5 DI
	Blank	Analysis	for	sample(s)	02	(WG27754	4-1	<b>)</b>			
Oil & Grease, Hem-		ND		mg/l		4.0		1664A	0420 09:45	0423 13:3	30 A'
	Blank	Analysis	for	sample(s)	02	(WG27786	54-1	)			
Phenolics, Total		ND		mg/l		0.03		420.1		0424 09:4	45 A
	Blank	Analysis	for	sample(s)	01	(WG27664					
fotal Metals							19	200.7			
Antimony, Total		ND		mg/l		0.050		200.7	0412 17:45		
Arsenic, Total		ND		mg/l		0.005		200.7	0412 17:45		
Beryllium, Total		ND		mg/l		0.005		200.7	0412 17:45		
Cadmium, Total		ND		mg/1		0.005 0.01		200.7		5 0413 10: 5 0413 10:	
Chromium, Total		ND ND		mg/l mg/l		0.01		200.7 200.7		5 0413 10: 5 0413 10:	
Copper, Total Lead, Total		ND ND		mg/l		0.010		200.7		5 0413 10:	
Nickel, Total		ND ND		mg/l		0.025		200.7		5 0413 10:	
Selenium, Total		ND		mg/1		0.010		200.7		5 0413 10:	
ocaciii iocaa		ND		mg/1		0.007		9 200.7	0412 17:45		
Silver, Total											
Silver, Total Thallium, Total		ND		mg/l		0.020		200.7	0412 17:45	5 0413 10:	38 M

Laboratory Job Number: L0705021

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE I PREP ANAL
		****				
Blank Ana	lysis for s	ample(s) 0	1 (WG277	428-4	)	
Total Metals						
Mercury, Total	ND	mg/l	0.000	2 4	245.2	0419 18:15 0420 14:59 H
Blank Analy	sis for sam	ple(s) 02-	03 (WG27	7103-	4)	
Volatile Organics by GC/MS	624			5	624	0416 08:37 A
Methylene chloride	ND	ug/l	5.0			
1,1-Dichloroethane	ND	ug/l	1.5			
Chloroform	ND	ug/l	1.5			
Carbon tetrachloride	ND	ug/l	1.0			
1,2-Dichloropropane	ND	ug/l	3.5			
Dibromochloromethane	ND	ug/l	1.0			
1,1,2-Trichloroethane	ND	ug/l	1.5			
2-Chloroethylvinyl ether	ND	ug/l	10.			
Tetrachloroethene	ND	ug/l	1.5			
Chlorobenzene	ND	ug/l	3.5			
Trichlorofluoromethane	ND	ug/l	5.0			
1,2-Dichloroethane	ND	ug/l	1.5			
1,1,1-Trichloroethane	ND	ug/l	2.0			
Bromodichloromethane	ND	ug/l	1.0			
trans-1,3-Dichloropropene	ND	ug/l	1.5			
cis-1,3-Dichloropropene	ND	ug/l	1.5			
Bromoform	ND	ug/l	1.0			
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0			
Benzene	ND	ug/l	1.0			
Toluene	ИD	ug/l	1.0			
Ethylbenzene	ND	ug/l	1.0			
Chloromethane	ND	ug/l	10.			
Bromomethane	ND	ug/l	5.0			
Vinyl chloride	ND	ug/l	2.0			
Chloroethane	ND	ug/l	2.0			
1,1-Dichloroethene	ND	ug/l	1.0			
trans-1,2-Dichloroethene	ND	ug/l	1.5			
cis-1,2-Dichloroethene	ND	ug/l	1.0			
Trichloroethene	ND	ug/l	1.0			
1,2-Dichlorobenzene	ND	ug/l	5.0			
1,3-Dichlorobenzene	ND	ug/l	5.0			
1,4-Dichlorobenzene	ND	ug/l	5.0			
p/m-Xylene	ND	ug/l	2.0			
o-xylene	ND	ug/l	1.0			
Xylene (Total)	ND	ug/l	2.0			
Styrene	ND	ug/l	1.0			
Acetone	ND	ug/l	10.			
Carbon disulfide	ND	ug/l	5.0			
2-Butanone	ND	ug/l	10.			
Vinyl acetate	ND	ug/l	20.			
4-Methyl-2-pentanone	ND	ug/l	10.			

Laboratory Job Number: L0705021

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DA!	
					PREP	ANAL
Blank Analys:	is for samp	le(s) 02-0	03 (WG27)	7103-4)		
Volatile Organics by GC/MS 63		10(0) 02	33 (1102)	5 624		0416 08:37 MM
2-Hexanone	ND	ug/l	10.			
Acrolein	ND	ug/l	8.0			
Acrylonitrile	ND	ug/l	10.			
Methyl tert butyl ether	ND	ug/l	20.			
1,4-Dioxane	ND	ug/l	2000			
Tert-Butyl Alcohol	ND	ug/l	100			
Tertiary-Amyl Methyl Ether	ND	ug/l	20.			
Surrogate(s)	Recovery		QC Cr	iteria		
Pentafluorobenzene	87.0	90	80-12	0		
Fluorobenzene	100	90	80-12	0		
4-Bromofluorobenzene	95.0	90	80-12	0		
Blank Anal	ysis for sa	ample(s) 0	1 (WG276	609-1)		
SVOC's by GC/MS 625				5 625	0412 19:30	0418 09:18 RL
Acenaphthene	ND	ug/l	5.0			
Benzidine	NĐ	ug/l	50.			
1,2,4-Trichlorobenzene	ND	ug/l	5.0			
Hexachlorobenzene	ND	ug/l	5.0			
Bis(2-chloroethyl)ether	ND	ug/l	5.0			
2-Chloronaphthalene	ND	ug/l	6.0			
1,2-Dichlorobenzene	ND	ug/l	5.0			
1,3-Dichlorobenzene	ND	ug/l	5.0			
1,4-Dichlorobenzene	ND	ug/l	5.0			
3,3'-Dichlorobenzidine	ND	ug/l	50.			
2,4-Dinitrotoluene	ND	ug/l	6.0			
2,6-Dinitrotoluene	ИD	ug/l	5.0			
Azobenzene	ИD	ug/l	5.0			
Fluoranthene	ND	ug/l	5.0			
4-Chlorophenyl phenyl ether	ND	ug/l	5.0			
4-Bromophenyl phenyl ether	ND	ug/1	5.0			
Bis(2-chloroisopropy1)ether	ND	ug/l	5.0			
Bis(2-chloroethoxy)methane	ИD	ug/l	5.0			
Hexachlorobutadiene	ND	ug/l	10.			
Hexachlorocyclopentadiene	ND	ug/l	30.			
Hexachloroethane	ND	ug/l	5.0			
Isophorone	ND	ug/l	5.0			
Naphthalene	ND	ug/l	5.0			
Nitrobenzene	ND	ug/l	5.0			
NDPA/DPA	ND	ug/1	15.			
n-Nitrosodi-n-propylamine	ND	ug/1	5.0			
Bis(2-ethylhexyl)phthalate	ND	ug/l	5.0			
Butyl benzyl phthalate	ND	ug/l	5.0			
Di-n-butylphthalate	ND	ug/l	5.0			
Di-n-octylphthalate	ND	ug/1	5.0			
Diethyl phthalate	ND	ug/l	5.0			

Laboratory Job Number: L0705021

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DAT		ID
					PREP	ANAL	
	•••						
	is for	sample(s) 01	(WG276		0412 10:20 0	410 00 3	Q D7
SVOC's by GC/MS 625 cont'd			F 0	5 625	0412 19:30 0	418 09:1	.в кь
<i>j</i> - <u>F</u>	ND	ug/l	5.0				
<b>\ \</b>	ND	ug/l	5.0				
	ND	ug/1	5.0				
	ИD	ug/l	5.0				
Benzo(k)fluoranthene	ИD	ug/1	5.0				
1	ND	ug/l	5.0				
Acenaphthylene	ND	ug/l	5.0				
Anthracene	ND	ug/l	5.0				
Benzo(ghi)perylene	ND	ug/l	5.0				
Fluorene	ND	ug/l	5.0				
Phenanthrene	ND	ug/l	5.0				
Dibenzo(a,h)anthracene	ND	ug/l	5.0				
Indeno(1,2,3-cd)pyrene	ND	ug/l	7.0				
Pyrene	ND	ug/l	5.0				
Aniline	ND	ug/l	20.				
4-Chloroaniline	ND	uq/l	5.0				
1-Methylnaphthalene	ND	ug/l	5.0				
2-Nitroaniline	ND	ug/l	5.0				
3-Nitroaniline	ND	ug/l	5.0				
4-Nitroaniline	ND	ug/l	7.0				
Dibenzofuran	ND	ug/l	5.0				
2-Methylnaphthalene	ND	ug/l	5.0				
n-Nitrosodimethylamine	ND	ug/l	50.				
2,4,6-Trichlorophenol	ND	ug/l	5.0				
p-Chloro-m-cresol	ND	ug/l	5.0				
2-Chlorophenol	ND	ug/l	6.0				
2,4-Dichlorophenol	ND	ug/l	10.				
2,4-Dimethylphenol	ND	ug/l	10.				
2-Nitrophenol	ND	ug/l	20.				
4-Nitrophenol	ND	ug/l	10.				
2,4-Dinitrophenol	ND	ug/l	30.				
•	ND	ug/1	20.				
4,6-Dinitro-o-cresol		ug/l	10.				
Pentachlorophenol	ND	ug/l ug/l	7.0				
Phenol	ND	· .	6.0				
2-Methylphenol	ND	ug/1					
3-Methylphenol/4-Methylphenol	ND	ug/l	6.0				
2,4,5-Trichlorophenol	ND	ug/1	5.0				
2,6-Dichlorophenol	ND	ug/l	10.				
Benzoic Acid	ND	ug/1	50.				
Benzyl Alcohol	ΝD	ug/1	10. 5.0				
Carbazole	ND	ug/l	3.0				
Surrogate(s)	Recove	ery	QC C	riteria			
2-Fluorophenol	37.0	- %	21-1	20			
Phenol-d6	33.0	્ર	10-1	20			
Nitrobenzene-d5	63.0	96	23-1				

Laboratory Job Number: L0705021

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP	IANAL	(D
	nalysis for s	ample(s) 0	1 (WG276	5609-1) 5 625	0412 19:30 04	10 00.10 0	D.T.
SVOC's by GC/MS 625 cont' 2-Fluorobiphenyl	49.0	96	43-12		0412 19:30 04	10 V9,10 P	VP.
2,4,6-Tribromophenol	70.0	96	10-12	· ·			
• •							

### ALPHA ANALYTICAL LABORATORIES ADDENDUM I

#### REFERENCES

- Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020. Revised March 1983.
- Methods for the Organic Chemical Analysis of Municipal and Industrial Wastewater. Appendix A, Part 136, 40 CFR (Code of Federal Regulations).
- 19. Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.
- 44. Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.
- 74. Method 1664,Revision A: N-Hexane Extractable Material (HEM; Oil & Grease) and Silica Gel Treated N-Hexane Extractable Material (SGT-HEM; Non-polar Material) by Extraction and Gravimetry, EPA-821-R-98-002, February 1999.

#### GLOSSARY OF TERMS AND SYMBOLS

REF Reference number in which test method may be found.

METHOD Method number by which analysis was performed.

ID Initials of the analyst.

ND Not detected in comparison to the reported detection limit.

NI Not Ignitable.

ug/cart Micrograms per Cartridge.

### LIMITATION OF LIABILITIES

Alpha Analytical, Inc. performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical, Inc., shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical, Inc. be held liable for any incidental consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical, Inc.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding times and splitting of samples in the field.

CIAN	CHAIN OF CUSTODY	PAGE OF	Date Rec'd in Lab: A	ALPHA Job #: [_070502]
	Project Information		Report Information - Data Deliverables E	<b>- 1888</b>
TEL: 508-898-9220 TEL: 508-822-9300 FAX: 508-898-9193 FAX: 508-822::2288	Project Name: Sens Annual (April)	nual (April)		Same as Client info PO #.
Client Information	Project Location PTC	N 502	L ADEX C Add Deliverables	
Client Rohm & Hars Flow Mar	Project #:		State / Fed Program   Criteria	
Address: 405 Bare 1 ST.	Project Manager Ke 144	Lemaire		
Mariborary M. A.	ALPHA Quote #:		MAMOP PRESUMPTIVE CERTAINTY —CT REASONABLE CONFIDENCEPROTOCOLS	SONABLECONFIDENCEPROTOCOLS
Phone: (508) 229-7177	Turn-Around/Time		☐ Yes ☐ No Are MCP Analytical Methods Required?	quired?
	Castandard D RUSH	RUSH (only cool/fractil) or septime(!)	ONO Are CT RCP (Re	
Email:		Time:	10 Vo	SAMPLEHANDLING
☐ These samples have been previously analyzed by Alpha	49507		15////5/	/ Filtration
Refiner Ly C During Collection, Storage, and Transport	nments/Detection Limits: Ition, Storage, and	LTransport	(O)	□ Not needed □ Lab to do
Trobay TO AIPHA	Refrig, Temp 4	7°04	18/2/01/19/19	Preservation 0
ALPHA Lab ID (Lab Use Only)	<b>∄</b>  ,⊊	Sample Sampler's Matrix Initials	1	Sample Specific Comments
A 10-120	-	П Х		
				d W S)
				(o m v
16		Ę K		Co W 02
TT.		FKL	7	Comp
1 / do-		D AL	\hat{\chi}	Grab
, (- ±		T K	>	Grab
(1)		T KiL		Grab
X		四 次 ご		Grab
Q & Q		メードに		
PLEASE ANSWER QUESTIONS ABOVE!		Container Type	V P P P P P V	Please print clearly, legibly and
TOU COO OI TON OI	- With A Maria And Andrews And	Preservative	C 0 A A A D B E A A	logged in and turnaround time clock
MA MCP or CT RCP?	Relinquished By	- 12 07 164C	Received By: Date/Time	will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.
FORM NC: 01-01 (rev. 10-OCT-05)				armine definitions

I

#### ALPHA ANALYTICAL LABORATORIES

#### Eight Walkup Drive

### Westborough, Massachusetts 01581-1019

(508) 898-9220

www.alphalab.com

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

#### CERTIFICATE OF ANALYSIS

Client: Rohm & Haas

Laboratory Job Number: L0713556

Address: 455 Forest Street

Date Received: 18-SEP-2007

Marlboro, MA 01752

Date Reported: 26-SEP-2007

Attn: Mr. Keith LeMaire

Delivery Method: Client

Project Number:

Site: BOD & PHOS

L0713556-01 A-UHP JANITOR CLOSET MULTIPLE LOCATIONS L0713556-02 B-UHP JANITOR CLOSET MULTIPLE LOCATIONS L0713556-03 C-COL (MAINTANCE) MULTIPLE LOCATIONS L0713556-04 D-COL (MAINTANCE) MULTIPLE LOCATIONS	ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
	L0713556-02 L0713556-03	B-UHP JANITOR CLOSET C-COL (MAINTANCE)	MULTIPLE LOCATIONS MULTIPLE LOCATIONS

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized by: Michelle M. Chomis

Technical Representative

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## ALPHA ANALYTICAL LABORATORIES NARRATIVE REPORT

Laboratory Job Number: L0713556

The samples were received in accordance with the chain of custody and no significant deviations were encountered during preparation or analysis unless otherwise noted below.

Total Phosphorus

L0713556-03 has an elevated detection limit due to 25x dilution required by the matrix of the sample.

BOD

L0713556-04 has an elevated detection limit due to the 50x dilution required by the elevated concentrations of BOD in the sample.

### ALPHA ANALYTICAL LABORATORIES CERTIFICATE OF ANALYSIS

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number: L0713556-01

Date Collected: 18-SEP-2007 07:40

A-UHP JANITOR CLOSET

Date Received: 18-SEP-2007

Sample Matrix:

WATER

Date Reported: 26-SEP-2007

Condition of Sample: Satisfactory

Field Prep:

None

Number & Type of Containers: 1-Plastic

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE ID PREP ANAL
BOD, 5 day	ND	mg/l	2.0	30 5210B	0919 07:00 0924 15:30 DW

Comments: Complete list of References and Glossary of Terms found in Addendum I

09260717:58 Page 3 of 10

### ALPHA ANALYTICAL LABORATORIES CERTIFICATE OF ANALYSIS

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number: L0713556-02

Date Collected: 18-SEP-2007 07:40

B-UHP JANITOR CLOSET

Date Received: 18-SEP-2007

Sample Matrix:

Date Reported: 26-SEP-2007

Condition of Sample: Satisfactory

WATER

Field Prep:

None

Number & Type of Containers: 1-Plastic

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE ID PREP ANAL
Phosphorus, Total	0.02	mg/l	0.01	30 4500P-E	0925 14:55 HS

Comments: Complete list of References and Glossary of Terms found in Addendum  ${\tt I}$ 

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number: L0713556-03

Date Collected: 18-SEP-2007 07:40

C-COL (MAINTANCE)

Date Received: 18-SEP-2007

Sample Matrix:

WATER

Date Reported: 26-SEP-2007

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1-Plastic

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE ID
					PREP ANAL
Dhoophome Matal	2.6				- · · · · · · · · · · · · · · · · · · ·
Phosphorus, Total	3.6	mg/1	0.25	30 4500P~E	0925 14:55 HS

Comments: Complete list of References and Glossary of Terms found in Addendum I

09260717:58 Page 5 of 10

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number: L0713556-04

Date Collected: 18-SEP-2007 07:40

L0/13556-04 D-COL (MAINTANCE)

Date Received: 18-SEP-2007

Sample Matrix:

WATER

Date Reported: 26-SEP-2007

Condition of Sample: Satisfactory

Field Prep:

None

Number & Type of Containers: 1-Plastic

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE ID PREP ANAL
BOD, 5 day	590	mg/l	100	30 5210B	0919 07:00 0924 15:30 DW

Comments: Complete list of References and Glossary of Terms found in Addendum I

09260717:58 Page 6 of 10

# ALPHA ANALYTICAL LABORATORIES QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Parameter		Value 1	Value	2 Units	RPD	RPD	Limits
	Phosphorus,	Total for sa	umple(s)	02-03 (L07137	51-04,	WG29547	5-3)
Phosphorus,		0.36			3	20	·
	BOD, 5	day for sampl	e(s) 01,	,04 (L0713562-	01, WG2	94631-4	)
BOD, 5 day		16	13	mg/l	21	35	

# ALPHA ANALYTICAL LABORATORIES QUALITY ASSURANCE BATCH SPIKE ANALYSES

Parameter	% Recovery QC Criteria
Phosphorus,	Total LCS for sample(s) 02-03 (WG295475-2)
Phosphorus, Total	108 85-115
BOD, 5 c	day LCS for sample(s) 01,04 (WG294631-2)
BOD, 5 day	95 85-115
Phosphorus, Total S	PIKE for sample(s) 02-03 (L0713751-06, WG295475-4)
Phosphorus, Total	98 80-120
BOD, 5 day SPIF	<pre>XE for sample(s) 01,04 (L0713601-01, WG294631-3)</pre>
BOD, 5 day	95 50-145

### ALPHA ANALYTICAL LABORATORIES QUALITY ASSURANCE BATCH BLANK ANALYSIS

PARAMETER		RESULT	UNITS	RDL	REF METHOD	DATE ID PREP ANAL
						PREP ANAL
	Blank Analys					
		is for samp ND	ole(s) 02-03 mg/l	0.01	5475-1) 30 4500P-E	0925 14:55 HS
Phosphorus, Tota		ND	mg/l	0.01	30 4500P-E	0925 14:55 HS

# ALPHA ANALYTICAL LABORATORIES ADDENDUM I

#### REFERENCES

30. Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

### GLOSSARY OF TERMS AND SYMBOLS

REF Reference number in which test method may be found.

METHOD Method number by which analysis was performed.

ID Initials of the analyst.

ND Not detected in comparison to the reported detection limit.

NI Not Ignitable.

ug/cart Micrograms per Cartridge.

The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

#### LIMITATION OF LIABILITIES

Alpha Analytical, Inc. performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical, Inc., shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical, Inc. be held liable for any incidental consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical, Inc.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding times and splitting of samples in the field.

09260717:58 Page 10 of 10

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INIA MOR OF OF HOPE	9-1807 934	JANNAN WALLER	allelles 934 reschip	resolved. All samples submitted are subject to Alpha's Payment. Terms.

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### ALPHA ANALYTICAL LABORATORIES

### Eight Walkup Drive Westborough, Massachusetts 01581-1019

(508) 898-9220 www.alphalab.com

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

#### CERTIFICATE OF ANALYSIS

Client: Rohm & Haas

Laboratory Job Number: L0712402

Address: 455 Forest Street

Marlboro, MA 01752

Date Received: 28-AUG-2007

Attn: Mr. Keith LeMaire Date Reported: 04-SEP-2007

Project Number:

Delivery Method: Client

Site:

BOD & PHOS

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L0712402-01 L0712402-02 L0712402-03 L0712402-04	A B C D	C01 (MAINTENANCE) BATCH 0828073A C01 (MAINTENANCE) UHP (JANITOR)

Michelle M. Monis Authorized by: Technical Representative

09040711:05 Page 1 of 10

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

# ALPHA ANALYTICAL LABORATORIES NARRATIVE REPORT

Laboratory Job Number: L0712402

The samples were received in accordance with the chain of custody and no significant deviations were encountered during preparation or analysis unless otherwise noted below.

Sample Receipt

The samples were received at the laboratory above the required temperature range. The samples were transported to the laboratory in a cooler with blue ice and delivered directly from the sampling site.

BOD

The following samples have elevated detection limits due to the dilutions required by the elevated concentrations of BOD in the samples:

L0712402-03: 50x

L0712402-04: 100x

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number: L0712402-01

Date Collected: 28-AUG-2007 10:30

Α

Date Received: 28-AUG-2007
Date Reported: 04-SEP-2007

Sample Matrix: WATER

Condition of Sample: Satisfactory Field Prep: None

Number & Type of Containers: 1-Plastic

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE I
					PREP ANAL
Phosphorus, Total	0.36	mg/l	0.01	30 4500P-E	0828 19:00 н

Comments: Complete list of References and Glossary of Terms found in Addendum I

09040711:05 Page 3 of 10

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number: L0712402-02

Date Collected: 28-AUG-2007 10:30

Date Received: 28-AUG-2007

Sample Matrix:

WATER

Date Reported: 04-SEP-2007

Condition of Sample: Satisfactory

Field Prep:

None

Number & Type of Containers: 1-Plastic

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE ID
					PREP ANAL
Phosphorus, Total	0.02	mg/l	0.01	30 4500P-E	0826 19:00 HS

Comments: Complete list of References and Glossary of Terms found in Addendum  $\scriptstyle\rm I$ 

09040711:05 Page 4 of 10

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number: L0712402-03

Date Collected: 28-AUG-2007 10:30

Date Received: 28-AUG-2007

C Sample Matrix: WATER Date Reported: 04-SEP-2007

Condition of Sample: Satisfactory Field Prep: None

Number & Type of Containers: 1-Plastic

PARAMETER	RESULT	UNITS	$\mathtt{RDL}$	REF METHOD	DATE	ID
					PREP ANAL	
BOD, 5 day	350	mg/l	100	30 5210B	0829 11:35 0903 09:	45 DW

Comments: Complete list of References and Glossary of Terms found in Addendum I

09040711:05 Page 5 of 10

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number: L0712402-04

Date Collected: 28-AUG-2007 10:30

Date Received: 28-AUG-2007

Sample Matrix: WATER

Date Reported: 04-SEP-2007

Condition of Sample: Satisfactory

Field Prep:

None

Number & Type of Containers: 1-Plastic

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE ID PREP ANAL
BOD, 5 day	960	mg/l	200	30 5210B	0829 11:35 0903 09:45 DW

Comments: Complete list of References and Glossary of Terms found in Addendum  ${\tt I}$ 

09040711:05 Page 6 of 10

# ALPHA ANALYTICAL LABORATORIES QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Parameter		Value 1	Value	2	Units	RPD	RPD Limits
	Phosphorus,	Total for s	ample(s)	01-02	2 (L0712)	133-02, W	(G292145-3)
Phosphorus,		0.12			mg/l		20
	BOD, 5 d	ay for samp	ole(s) 03-	-04 (1	L0712398-	-03, WG29	2326-3)
BOD, 5 day		380	490		mg/l	25	35

# ALPHA ANALYTICAL LABORATORIES QUALITY ASSURANCE BATCH SPIKE ANALYSES

Parameter	% Recovery QC Criteria	
Phosphorus, Total LC	S for sample(s) 01-02 (WG292145-2)	
Phosphorus, Total	106 85-115	
BOD, 5 day LCS fo	r sample(s) 03-04 (WG292326-2)	
BOD, 5 day	108 85-115	
Phosphorus, Total SPIKE for	sample(s) 01-02 (L0712398-01, WG292145-4)	
Phosphorus, Total	99 80-120	
BOD, 5 day SPIKE for sam	ple(s) 03-04 (L0712398-04, WG292326-4)	
BOD, 5 day	156 50-145	

# ALPHA ANALYTICAL LABORATORIES QUALITY ASSURANCE BATCH BLANK ANALYSIS

PARAMETER		RESULT	UNITS	RDL	REF	METHOD	DAT	E	ID
							PREP	ANAL	
Phosphorus,	-	sis for samp	ole(s) 01-02 mg/l	-		l) 4500P-E	0	828 19:00	э нѕ
BOD, 5 day	Blank Analy	sis for samp ND	ole(s) 03-04 mg/l	(WG29:		l) 5210B	0829 11:35 0		

# ALPHA ANALYTICAL LABORATORIES ADDENDUM I

#### REFERENCES

30. Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition, 1992.

### GLOSSARY OF TERMS AND SYMBOLS

REF Reference number in which test method may be found.

METHOD Method number by which analysis was performed.

ID Initials of the analyst.

ND Not detected in comparison to the reported detection limit.

NI Not Ignitable.

ug/cart Micrograms per Cartridge.

The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

#### LIMITATION OF LIABILITIES

Alpha Analytical, Inc. performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical, Inc., shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical, Inc. be held liable for any incidental consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical, Inc.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding times and splitting of samples in the field.

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### ALPHA ANALYTICAL LABORATORIES

# Eight Walkup Drive Westborough, Massachusetts 01581-1019 (508) 898-9220 www.alphalab.com

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

#### CERTIFICATE OF ANALYSIS

Client: Rohm & Haas

Laboratory Job Number: L0616102

Address: 455 Forest Street

Marlboro, MA 01752

Date Received: 08-NOV-2006

Attn: Mr. Keith LeMaire

Date Reported: 22-NOV-2006

Project Number:

Delivery Method: Client

Site:

BOD, NH3, TPHOS

ALPHA SAMPLE NUMBER CLIENT IDENTIFICATION SAMPLE LOCATION

L0616102-01 A&B-MAINT. MAINT/POST TREAT
L0616102-02 C&D-POST MAINT/POST TREAT

Authorized by:
Technical Director

Page 1 of 8

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11220617:05

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

# ALPHA ANALYTICAL LABORATORIES NARRATIVE REPORT

Laboratory Job Number: L0616102

The samples were received in accordance with the chain of custody and no significant deviations were encountered during preparation or analysis unless otherwise noted below.

BOD

L0616102-02: The sample could not be de-chlorinated and therefore could not be analyzed.

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number: L0616102-01

A&B-MAINT.

Date Collected: 08-NOV-2006 09:00

Date Reported: 22-NOV-2006

Date Received: 08-NOV-2006

Sample Matrix:

Condition of Sample: Satisfactory

WATER

Field Prep: None

Number & Type of Containers: 2-Plastic

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE ID PREP ANAL
Nitrogen, Ammonia	13.8	mg/l	0.075	44 350.1	1115 18:50 1116 14:38 AT
Phosphorus, Total	5.3	mg/l	0.25	4 365.2	1113 15:00 HS
BOD, 5 day	170	mg/l	50	4 405.1	1109 12:50 1114 15:25 DW

Comments: Complete list of References and Glossary of Terms found in Addendum  ${\tt I}$ 

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number: L0616102-02

C&D~POST

Date Collected: 08-NOV-2006 09:00

Date Received: 08-NOV-2006

Sample Matrix:

WATER

Date Reported: 22-NOV-2006

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 2-Plastic

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE ID PREP ANAL
Nitrogen, Ammonia	27.6	mg/l	0.075	44 350.1	1115 18:50 1116 14:39 AT
Phosphorus, Total	18	mg/l	0.50	4 365.2	1113 15:00 NS

Comments: Complete list of References and Glossary of Terms found in Addendum  ${\tt I}$ 

11220617:05 Page 4 of 8

# ALPHA ANALYTICAL LABORATORIES QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Parameter	Value	l Value	2 Units	RPD	RPD Limits
Nit	rogen, Ammonia for	sample(s)	01-02 (L0616	449-01,	WG260899-4)
Nitrogen, Ammonia	6.90	6.89	mg/l	0	
Pho	sphorus, Total for	sample(s)	01-02 (L0616	109-06,	WG260506-3)
Phosphorus, Total	0.10	0.10	mg/l	0	20

# ALPHA ANALYTICAL LABORATORIES QUALITY ASSURANCE BATCH SPIKE ANALYSES

Parameter	% Recovery QC Criteria
Nitrogen, Ammonia LCS for san Nitrogen, Ammonia	aple(s) 01-02 (WG260899-2) 92
Phosphorus, Total LCS for same Phosphorus, Total	mple(s) 01-02 (WG260506-2) 101 85-115
BOD, 5 day LCS for sample BOD, 5 day	le(s) 01 (WG260107-2) 104 85-115
Nitrogen, Ammonia SPIKE for sample(s) Nitrogen, Ammonia	01-02 (L0616449-03, WG260899-3) 78
Phosphorus, Total SPIKE for sample(s) Phosphorus, Total	01-02 (L0616036-01, WG260506-4) 99 80-120
BOD, 5 day SPIKE for sample(s) (BOD, 5 day	01 (L0616096-02, WG260107-3) 122 50-145

# ALPHA ANALYTICAL LABORATORIES QUALITY ASSURANCE BATCH BLANK ANALYSIS

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DAT	E II
					PREP	ANAL
					NIC.	
Blank Analy	sis for samp	ole(s) 01-02	2 (WG260	0899-1)		
Nitrogen, Ammonia	ND	mg/l	0.075	44 350.1	1115 18:50	1116 14:32 AT
Blank Analy	sis for samm	ole(s) 01-0	) /WC260	1506-11		
Phosphorus, Total	ND	mg/l		4 365.2		1113 15:00 HS
	,	g, 1	0.01	9 303.2		1113 13.00 Ma
Blank Ana	lysis for sa	ample(s) 01	(WG2601	LO7-1)		
BOD, 5 day	ND	mg/l	2.0	4 405.1	1109 12:50	1114 15:25 DW

# ALPHA ANALYTICAL LABORATORIES ADDENDUM I

#### REFERENCES

- 4. Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020. Revised March 1983.
- 44. Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.

#### GLOSSARY OF TERMS AND SYMBOLS

REF Reference number in which test method may be found.

METHOD Method number by which analysis was performed.

ID Initials of the analyst.

ND Not detected in comparison to the reported detection limit.

NI Not Ignitable.

ug/cart Micrograms per Cartridge.

## LIMITATION OF LIABILITIES

Alpha Analytical, Inc. performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical, Inc., shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical, Inc. be held liable for any incidental consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical, Inc.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding times and splitting of samples in the field.

11220617:05 Page 8 of 8

ALPHA Job#: (Old 1010) Billing Information C Same as Client info Portion 1255	ABLECONFIDENCEPROTOCOLS  d?  Protocos) Required?  Filtration Done Done Dot needed Dot needed Lab to do Preservation Lab to do Preservation Lab to do	Sample Specific Comments  Cownto  Cown	Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms. See reverse side.
d in Lab:	MAMCPPRESUMPTIVE CHITAINITY—CTREASONABLECONFIDENCEPROTOCOLS  The Diversion Are MCP Analytical Methods Required?  The Diversion Are CT RCP (Reasonable Confidence Protocos) Required?  SAMPLE HANDLING  Filtration  Done  SAMPLE HANDLING  Filtration  Done  SAMPLE HANDLING  Filtration  Done  Company  Comp		Received By: II. P. bt. (12.5
PAGE OF THE STANCE	JSH one continued if presence of the Transfer of Trans		Container Type P P Preservative D P Date/Time
HAN OF	SS 2 SS 2 Susy analyzed by Alpha Uirements/Comme Universes Collections APPHR	Sample ID  C - Rest  D Post	CT RCP? Kein Was
WESTBORG, MA TEL. 503-898-9220 TEL. 503-898-933 FAX. 504-898-933 Cifent: Roy Ma	Phone: Sor-124-7177 Fax: Sor-481-2752 Email:  These samples have been previously a Other Project Specific Requirer Referred to the Confluence to the Conflue	ALPHA Lab ID (Lab Use Only)	PLEASE ANSWER QUESTIONS ABOVET IS YOUR PROJECT MAMCP OF CT RCP? FORM NO: 01-01 (164), 16-0CT-05)

#### ALPHA ANALYTICAL LABORATORIES

#### Eight Walkup Drive

### Westborough, Massachusetts 01581-1019

(508) 898-9220

www.alphalab.com

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

#### CERTIFICATE OF ANALYSIS

Client: Rohm & Haas

Laboratory Job Number: L0718426

Address: 455 Forest Street

Date Received: 12-DEC-2007

Marlboro, MA 01752

Date Reported: 17-DEC-2007

Attn:

Mr. Keith LeMaire

Delivery Method: Client

Project Number:

Site: FORMALDEHYDE

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L0718426-01	A	CBT
L0718426-02	В	CBT
L0718426-03	С	CBT
L0718426-04	D	CBT

Authorized by: Churtfly Washelf

Technical Director

12170715:13

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

# ALPHA ANALYTICAL LABORATORIES NARRATIVE REPORT

Laboratory Job Number: L0718426

The samples were received in accordance with the chain of custody and no significant deviations were encountered during preparation or analysis unless otherwise noted below.

Sample Receipt

The samples were received at the laboratory above the required temperature range. The samples were delivered directly from the sampling site but were not on ice.

Formaldehyde

The following samples have elevated limit of detection due to the dilutions required for the sample to quantitate within the calibration curve.

L0718426-01 and -02: 2500x

L0718426-03: 625x

L0718426-04: 25x

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number: L0718426-01

Date Collected: 11-DEC-2007 11:00

WATER

Date Received: 12-DEC-2007 Date Reported : 17-DEC-2007

Condition of Sample: Satisfactory

Sample Matrix:

Field Prep:

None

Number & Type of Containers: 1-Amber

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE ID PREP ANAL
Formaldehyde by EPA 8315A				·	
Formaldehyde	5900	mg/l	250	1 8315A	1212 15:00 1214 12:42 HS

Comments: Complete list of References and Glossary of Terms found in Addendum I

12170715:13 Page 3 of 10

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number: L0718426-02

Date Collected: 11-DEC-2007 10:00

WATER

Date Received: 12-DEC-2007 Date Reported: 17-DEC-2007

Sample Matrix:

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1-Amber

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE ID PREP ANAL
Formaldehyde by EPA 8315A					
Formaldehyde	4820	mg/l	250	1 8315A	1212 15:00 1214 01:27 HS

Comments: Complete list of References and Glossary of Terms found in Addendum  ${\tt I}$ 

12170715:13 Page 4 of 10

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number: L0718426-03

Date Collected: 12-DEC-2007 07:00

Sample Matrix: WATER Date Received: 12-DEC-2007

Date Reported: 17-DEC-2007

Condition of Sample: Satisfactory

Field Prep:

None

Number & Type of Containers: 1-Amber

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE ID PREP ANAL
Formaldehyde by EPA 8315A					
Formaldehyde	3620	mg/l	62.5	1 8315A	1212 15:00 1212 18:50 HS

Comments: Complete list of References and Glossary of Terms found in Addendum I

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number: L0718426-04

Date Collected: 12-DEC-2007 07:00

D

Date Received: 12-DEC-2007 Date Reported: 17-DEC-2007

Sample Matrix: WATER

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1-Amber

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE ID PREP ANAL
Formaldehyde by EPA 8315A					
Formaldehyde	122	mg/l	2.50	1 8315A	1212 15:00 1214 04:28 HS

Comments: Complete list of References and Glossary of Terms found in Addendum I

12170715:13 Page 6 of 10

# ALPHA ANALYTICAL LABORATORIES QUALITY ASSURANCE BATCH SPIKE ANALYSES

Parameter	% Recovery QC Criteria	
Formaldehyde by EPA 8315A	LCS for sample(s) 01-04 (WG305562-2)	
Formaldehyde	72 39–153	

# ALPHA ANALYTICAL LABORATORIES QUALITY ASSURANCE BATCH MS/MSD ANALYSIS

Parameter	MS %	MSD	% RPD	RPD Limit	MS/MSD Limits
Formaldehyde by EPA 8315A Formaldehyde	for sample(s)	01-04 66	(L0718319-08,	WG305562-4) 40	39-153

# ALPHA ANALYTICAL LABORATORIES QUALITY ASSURANCE BATCH BLANK ANALYSIS

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP ANAL	ID
Blank Formaldehyde by EPA 8	Analysis for samp 315A	ple(s) 01-0	)4 (WG30	5562-1)	7	
Formaldehyde	ND	mg/l	0.100	1 8315A	1212 15:00 1212 21:5	

# ALPHA ANALYTICAL LABORATORIES ADDENDUM I

#### REFERENCES

1. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

#### GLOSSARY OF TERMS AND SYMBOLS

REF Reference number in which test method may be found.

METHOD Method number by which analysis was performed.

ID Initials of the analyst.

ND Not detected in comparison to the reported detection limit.

NI Not Ignitable.

ug/cart Micrograms per Cartridge.

The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

### LIMITATION OF LIABILITIES

Alpha Analytical, Inc. performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical, Inc., shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical, Inc. be held liable for any incidental consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical, Inc.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding times and splitting of samples in the field.

Date Rec'd in Lab: 12 (12 (0)  Report Information - Data Deliverables  D FAX  D EMAIL  D ADEx  D Add't Deliverables  Regulatory Requirements/ Report Limits  State / Fed Program  O Yes D No  Are MCP Analytical Methods Required?  D Yes D No  Are CT RCP (Reasonable Confidence Protocols) Required?	Sample Specific Comments  Sample Specific Comments  Ling 2 12-11-07  Ling 3 13-11-07  Ling 3 13-11-07  Ling 4 2 13-11-07  Ling 5 13-11-07  Ling 7 2 14 15 2	Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguilies are will not start until any ambiguilies are subject to Alpha's Payment Tarms. See reverse side.
7	Time:  Time:  Time:  Time:  The Copper of Sample Sampler's  Too E KL  Con Sample Sampler's  Too E KL  Con	Container Type A A A A A B Preservative A A A A B By:  Date/Time  18.12-07 10:05
Project Informatili Project Location: (Project Manager: KALPHA Quote #:  Turn-Around Tim		Relinquished By:
CHAIR  WESTEORO, MA TEL: 508-398-3220 FAX: 508-398-933 FAX: 508-398-933 Glient: Rohwelton Olient: Rohwelton Address: 455 Feres T SY Address: 455 Feres T SY Phone: 508-224-7/77 Fax:	Email:    These samples have been previously analyzed by Alpha   Date Due:	PLEASE ANSWERGUESTIONS ABOVE! IS YOUR PROJECT MA MCP of CT RCP?

### ALPHA ANALYTICAL LABORATORIES

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#### CERTIFICATE OF ANALYSIS

Client: Rohm & Haas

Laboratory Job Number: L0717532

CO1 MAINTENANCE

Address: 455 Forest Street

Date Received: 27-NOV-2007

Marlboro, MA 01752

Date Reported: 04-DEC-2007

Attn: Mr. Keith LeMaire

L0717532-02

Delivery Method: Client

Project Number:

Site: BOD & COD

ALPHA SAMPLE NUMBER CLIENT IDENTIFICATION SAMPLE LOCATION

L0717532-01 A&B UHP JANITOR CLOSET

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized by:

Technical Representative

Michelle M. Monis

12040716:31

Page 1 of 8

# ALPHA ANALYTICAL LABORATORIES NARRATIVE REPORT

Laboratory Job Number: L0717532

The samples were received in accordance with the chain of custody and no significant deviations were encountered during preparation or analysis unless otherwise noted below.

Sample Receipt

The samples were received at the laboratory above the required temperature range. The samples were transported to the laboratory in a cooler with ice and delivered directly from the sampling site.

BOD

L0717532-02 has an elevated detection limit due to the  $50 \times 10^{-5}$  dilution required for analysis of higher BOD concentrations.

The WG303591-2 LCS % recovery is above the acceptance criteria for the method. The batch cannot be re-analyzed due to expired sample hold time. Therefore, the data is reported.

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number: L0717532-01

Date Collected: 27-NOV-2007 09:30

Sample Matrix:

Α&B

Date Received : 27-NOV-2007

WATER

Date Reported: 04-DEC-2007

Condition of Sample: Satisfactory

Field Prep:

None

Number & Type of Containers: 2-Plastic

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE ID PREP ANAL
Chemical Oxygen Demand	21	mg/l	20	44 410.4	1130 10:15 DW
BOD, 5 day	ND	mg/l	2.0	30 5210B	1128 10:30 1203 13:25 DW

Comments: Complete list of References and Glossary of Terms found in Addendum I

12040716:31 Page 3 of 8

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number: L0717532-02

Date Collected: 27-NOV-2007 09:30

C&D

Date Received: 27-NOV-2007

Sample Matrix: WATER Date Reported: 04-DEC-2007

Condition of Sample: Satisfactory

Field Prep:

None

Number & Type of Containers: 2-Plastic

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE ID PREP ANAL
Chemical Oxygen Demand	250	mg/l	20	44 410.4	1130 10:15 DW
BOD, 5 day	430	mg/l	100	30 5210В	1128 10:30 1203 13:25 DW

 $\hbox{{\tt Comments: Complete list of References and Glossary of Terms found in Addendum I}\\$ 

# ALPHA ANALYTICAL LABORATORIES QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Parameter	Value	1	Value 2	Units	RPD	RPD Limits
Chemical Chemical Oxygen Demand	Oxygen Demand 23		sample(s) 30	01-02 (L0717 mg/l	7672-01, 26	WG303897-4) 20
BOD	, 5 day for s	ample(	(s) 01-02	(L0717532-02	, WG303	591-4)
BOD, 5 day	430		390	mg/l	10	35

### ALPHA ANALYTICAL LABORATORIES QUALITY ASSURANCE BATCH SPIKE ANALYSES

Parameter	% Recovery QC Criteria
Chemical Oxygen Demand LCS Chemical Oxygen Demand	for sample(s) 01-02 (WG303897-2) 100 95-105
BOD, 5 day LCS for sa	ample(s) 01-02 (WG303591-2) 118 85-115
Chemical Oxygen Demand SPIKE for s	sample(s) 01-02 (L0717672-01, WG303897-3) 98 80-120
BOD, 5 day SPIKE for sample BOD, 5 day	(s) 01-02 (L0717532-01, WG303591-3) 123 50-145

# ALPHA ANALYTICAL LABORATORIES QUALITY ASSURANCE BATCH BLANK ANALYSIS

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE	ID
					PREP ANA	AL
Chemical Oxygen	Blank Analysis for sa Demand ND	mple(s) 01-0 mg/l	02 (WG30 20.	3897-1) 44 410.4	1130 2	10:15 DW
BOD, 5 day	Blank Analysis for sa	mple(s) 01-0 mg/l	02 (WG30 2.0	3591-1) 30 5210B	1128 10:30 1203 1	13:25 DW

# ALPHA ANALYTICAL LABORATORIES ADDENDUM I

#### REFERENCES

- 30. Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition, 1992.
- 44. Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.

### GLOSSARY OF TERMS AND SYMBOLS

REF Reference number in which test method may be found.

METHOD Method number by which analysis was performed.

ID Initials of the analyst.

ND Not detected in comparison to the reported detection limit.

NI Not Ignitable.

ug/cart Micrograms per Cartridge.

The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

#### LIMITATION OF LIABILITIES

Alpha Analytical, Inc. performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical, Inc., shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical, Inc. be held liable for any incidental consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical, Inc.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding times and splitting of samples in the field.

on-Data Deliverables  Ellling Information  EMAIL  Add'I Deliverables  Rements/Report Limits  Calenia  Are MCP Analytical Methods Required?  Are CT RCP (Reasonable Confidence Protozols) Required?	SAMPLEHANDLING  Fitration  Done  Not needed  Lab to do  Preservation  Lab to do  Preservation  Lab to do  Preservation  (Preservation)  (Preservation)	Sample Specific Comments  UHP Jan Mor Cless T  Col Main Fragar  Col Main Tragar	Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.
Date Rec'd in Lab: 11 27 10 ALPHA Job #: LOTITES 3— Report Information - Data Deliverables Billing Information    FAX	2002 2003 2003 2003 2003		
Ition  OLA & CO D  ANTITUM LE LEGATIONS  Metath Lemaire	Time:  MILD T  mits:  TRUCCUIC &  Sample Sam	7 0530 E	Relinquished By:  Date/Time    11-27-02   10.5
CHAIN OF CUSTO  WESTSOR, MA TEL 508-589-220 FAX: 508-589-130 FOO et Manager:  Address: 455 Forcett MA Phone: (565) 229-7177 Turn-Around ITI Fax:  Client: Address: 455 Forcett MA Froject #:  Address: 455 Forcett MA Froject MA Froject #:  Address: 455 Forcett MA Froject MA Froject #:  Address: 455 Forcett MA Froject #:  Address: 455 Forcett MA Froject MA Froject #:  Address: 455 Forcett MA Froject MA Froject MA Froject MA Froject MA Froject #:  Address: 455 Forcett MA Froject	r Project Specific Requirements/Cor County of the Dewittor Closed To Colored Toward Closed To Colored Toward County of Toward Colored Toward	(Lab Use Only) Sample ID  (Lab Use Only) Sample ID  (Lab Use Only)	IS YOUR PROJECT MA MCP of CT RCP?

### ALPHA ANALYTICAL LABORATORIES

### Eight Walkup Drive

### Westborough, Massachusetts 01581-1019

(508) 898-9220

www.alphalab.com

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

#### CERTIFICATE OF ANALYSIS

Client: Rohm & Haas

Laboratory Job Number: L0715972

Address: 455 Forest Street

Date Received: 25-OCT-2007

Marlboro, MA 01752

Date Reported: 08-NOV-2007

Attn: Mr. Keith LeMaire

Delivery Method: Client

Project Number:

Site: QUARTERLY (4TH)

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L0715972-01 L0715972-02	COMP GRAB	S01 OUTFALL

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized by:

Technical Representative

11080718:28 Page 1 of 10

# ALPHA ANALYTICAL LABORATORIES NARRATIVE REPORT

Laboratory Job Number: L0715972

The samples were received in accordance with the chain of custody and no significant deviations were encountered during preparation or analysis unless otherwise noted below.

Sample Receipt

The samples were received at the laboratory above the required temperature range. The samples were delivered directly from the sampling site but were not on ice.

BOD

L0715972-01 has an elevated detection limit due to the 25x dilution required for analysis of higher BOD concentrations.

Total Phosphorus

 $\pm 0.0715972-01$  has an elevated limit of detection due to the 10x dilutions required for the sample to fall within the calibration curve.

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number: L0715972-01

Date Collected: 25-OCT-2007 08:00

COMP

Date Received: 25-OCT-2007

Sample Matrix:

WATER

Date Reported: 08-NOV-2007

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 4-Plastic

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP ANAL	ID
Solids, Total Suspended	34	mg/l	5.0	30 2540D	1029 17:00	) DW
Nitrogen, Ammonia	14.6	mg/l	0.400	30 4500NH3-BE	1105 11:55	JL
Phosphorus, Total	2.1	mg/l	0.10	30 4500P-E	1031 15:30	) HS
Chemical Oxygen Demand	160	mg/l	20	44 410.4	1106 11:00	) DW
BOD, 5 day	150	mg/l	50	30 52108	1026 14:20 1031 17:50	) DW
Total Metals				19 200.7		
Aluminum, Total	ND	mg/l	0.10	19 200.7	1107 17:30 1108 13:22	MG
Antimony, Total	ND	mg/1	0.050	19 200.7	1107 17:30 1108 13:22	MG
Arsenic, Total	ND	mg/l	0.005	19 200.7	1107 17:30 1108 13:22	MG
Beryllium, Total	ИD	mg/l	0.005	19 200.7	1107 17:30 1108 13:22	MG
Cadmium, Total	ND	mg/l	0.005	19 200.7	1107 17:30 1108 13:22	MG
Chromium, Total	ND	mg/l	0.01	19 200.7	1107 17:30 1108 13:22	MG
Copper, Total	0.057	mg/l	0.010	19 200.7	1107 17:30 1108 13:22	MG
Lead, Total	ND	mg/l	0.010	19 200.7	1107 17:30 1108 13:22	MG
Mercury, Total	ND	mg/l	0.0002	3 245.1	1106 18:30 1107 13:02	RC
Nickel, Total	ND	mg/l	0.025	19 200.7	1107 17:30 1108 13:22	MG
Selenium, Total	ND	mg/l	0.010	19 200.7	1107 17:30 1108 13:22	MG
Silver, Total	ND	mg/1	0.007	19 200.7	1107 17:30 1108 15:33	B AI
Thallium, Total	ND	mg/l	0.020	19 200.7	1107 17:30 1108 13:22	MG
Zinc, Total	0.056	mg/l	0.050	19 200.7	1107 17:30 1108 13:22	2 MG

Comments: Complete list of References and Glossary of Terms found in Addendum I

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number: L0715972-02

Date Collected: 25-OCT-2007 08:00

GRAB

Date Received: 25-OCT-2007

Sample Matrix: WATER

Date Reported: 08-NOV-2007

Condition of Sample: Satisfactory

Field Prep:

None

Number & Type of Containers: 3-Amber, 1-Plastic

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DAT PREP	E ID
Cyanide, Total	ND	mg/l	0.005	30 4500CN-CE	1029 14:20 1	030 13:02 AT
Oil & Grease, Hem-Grav	13	mg/l	4.4	74 1664A	1105 09:00 1	:106 11:45 AT
Phenolics, Total	ND	mg/l	0.03	4 420.1	J	.030 18:00 ТН

Comments: Complete list of References and Glossary of Terms found in Addendum  $\ensuremath{\mathtt{I}}$ 

11080718:28 Page 4 of 10

# ALPHA ANALYTICAL LABORATORIES QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Parameter	Value 1	Value 2	Units	RPD	RPD Limits
Solids, Total S	Suspended fo	or sample(s)	01 (L0715	5961-01.	WG299965-2)
Solids, Total Suspended	510	530	mg/l	4	32
		mple(s) 02 (		01, WG300	0039-3)
Cyanide, Total	ND	ND	mg/l	NC	
Nitrogen, Am		sample(s) 01	(L071596)	l-01, WG3	300893-3)
Nitrogen, Ammonia	91.4	91.0	mg/l	0	20
Phosphorus,	Total for s	sample(s) 01	(L0716246	5-04, WG3	300416-3)
Phosphorus, Total	0.40	0.39	mg/l	3	20
Chemical Oxyger	n Demand for	sample(s)	01 (L07159	974-01. V	JG301089-4)
Chemical Oxygen Demand	30000	29000	mg/1	3	20
BOD. 5 da	av for samp	le(s) 01 (LC	)715973 <u>-</u> 01	WC29983	22-31
BOD, 5 day	130	120	mg/l	8	35
Oil & Grease, F	lom-Craz fo	r gamplo/cl	02 /10716	37E 01 5	10200071 41
Oil & Grease, Hem-Grav	41	44	mg/l	7	18
Phonolina	Bo+ ol for	1-(-) 00	/* 071E014	01 11020	20250 41
Phenolics, T Phenolics, Total	ND ND	ND ND	mg/l	NC NC	12
			ū		
Total Meta Arsenic, Total	als for samp ND	ole(s) 01 (I ND	.0715981-01 mg/l	l, WG3013 NC	344-1)
Cadmium, Total	ND	ND ND	mg/l	NC NC	
Chromium, Total	ND	ND	mg/l	NC	
Copper, Total	0.176	0.174	mg/l	1	
Lead, Total	0.020	0.021	mg/l	3	
Nickel, Total	0.506	0.497	mg/l	2	
-	0.010	0.011	mg/l	3	
Silver, Total					
Silver, Total Zinc, Total	ND	ND	mg/l	NC	
Zinc, Total	ND	ND ole(s) 01 (I			47-3)

# ALPHA ANALYTICAL LABORATORIES QUALITY ASSURANCE BATCH SPIKE ANALYSES

Parameter	% Recovery QC Criteria
	Cyanide, Total LCS for sample(s) 02 (WG300039-2)
Cyanide, Total	106
	trogen, Ammonia LCS for sample(s) 01 (WG300893-2)
Nitrogen, Ammon	.a 88 80-120
Phosphorus, Tota	nosphorus, Total LCS for sample(s) 01 (WG300416-2)
•	
Cher Chemical Oxygen	nical Oxygen Demand LCS for sample(s) 01 (WG301089-2)  Demand 96 95-105
	BOD, 5 day LCS for sample(s) 01 (WG299832-2)
BOD, 5 day	101 85-115
Oil Oil & Grease, He	& Grease, Hem-Grav LCS for sample(s) 02 (WG300971-2) em-Grav 92 78-114
]	Phenolics, Total LCS for sample(s) 02 (WG300260-2)
Phenolics, Total	
	Total Metals LCS for sample(s) 01 (WG301344-4)
Aluminum, Total	100
Antimony, Total	102
Arsenic, Total	109
Beryllium, Total	
Cadmium, Total	110
Chromium, Total	100 97
Copper, Total Lead, Total	100
Nickel, Total	97
Selenium, Total	111
Silver, Total	91
Thallium, Total	106
Zinc, Total	102
	Total Metals LCS for sample(s) 01 (WG301147-1)
Mercury, Total	98
Cyanide Cyanide, Total	, Total SPIKE for sample(s) 02 (L0715803-02, WG300039-4) 100
Nitrogen Nitrogen, Ammon	, Ammonia SPIKE for sample(s) 01 (L0715972-01, WG300893-4) ia 93 75-125
Phosphorus, Tot	us, Total SPIKE for sample(s) 01 (L0716246-06, WG300416-4) al 80-120

# ALPHA ANALYTICAL LABORATORIES QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0715972

### Continued

Parameter	% Recovery QC Criteria
Chemical Oxygen Demand SPIKE for sample Chemical Oxygen Demand	le(s) 01 (L0715974-01, WG301089-3) 81 80-120
BOD, 5 day SPIKE for sample(s) ( BOD, 5 day	01 (L0715959-01, WG299832-4) 112 50-145
Oil & Grease, Hem-Grav SPIKE for sample 0il & Grease, Hem-Grav	le(s) 02 (L0716277-02, WG300971-3) 84 78-114
Phenolics, Total SPIKE for sample(s	s) 02 (L0715914-01, WG300260-3) 90 77-124
Total Metals SPIKE for sample(s) Aluminum, Total Antimony, Total Arsenic, Total Beryllium, Total Cadmium, Total Chromium, Total Chromium, Total Lead, Total Lead, Total Selenium, Total Silver, Total Thallium, Total Zinc, Total	01 (L0715981-01, WG301344-2) 95 102 111 100 104 95 94 98 91 108 88 101 104
Total Metals SPIKE for sample(s) Mercury, Total	01 (L0715879-01, WG301147-2) 118

### ALPHA ANALYTICAL LABORATORIES QUALITY ASSURANCE BATCH BLANK ANALYSIS

PARAMETER		RES	SULT	UNITS		RDL	REF	METHOD	DA	TE	ID
									PREP	ANAL	
		···									
			for	sample(s)	01	(WG29996	65-1)	I			
Solids, Total Suspe	ended	ND		mg/l		5.0	30	254 <b>0</b> D		1029 17:	MG 00
E	3lank	Analysis	for	sample(s)	02	(WG30003	39-1)	l			
Cyanide, Total		ND		mg/l		0.005	30	4500CN-CE	1029 14:20	1030 13:	)1 AT
F	Blank	Analysis	for	sample(s)	01	(WG30089	93-1)	ı			
Nitrogen, Ammonia		ND		mg/l		0.400	30	4500NH3-BF.		1105 14:3	32 JL
E	3lank	Analysis	for	sample(s)	01	(WG30041	16-1)	ı			
Phosphorus, Total		ND		mg/l		0.01	30	4500P-E		1031 15:	80 нѕ
E	Blank	Analysis	for	sample(s)	01	(WG30108	89-1)				
Chemical Oxygen Dem		ND		mg/l		20.		410.4		1106 11:6	00 DW
E	Blank	Analysis	for	sample(s)	01	(WG29983	32-1)				
BOD, 5 day		ND		mg/l		2.0	30	5210B	1026 14:20	1031 17:	0 DW
E	Blank	Analysis	for	sample(s)	02	(WG30097	71-1)				
Oil & Grease, Hem-C	Grav	ND		mg/l		4.0	74	1664A	1105 09:00	1106 11:4	5 AT
	Blank	Analysis	for	sample(s)	02	(WG30026	60-1)				
Phenolics, Total		ND		mg/l		0.03	4	420.1		1030 18:0	10 TH
E Total Metals	3lank	Analysis	for	sample(s)	01	(WG30134		200.7			
							- /				
Aluminum, Total Antimony, Total		ND		mg/l		0.10		200.7	1107 17:30		
Arsenic, Total		ND ND		mg/1		0.050		200.7	1107 17:30		
Beryllium, Total		ND		mg/l		0.005		200.7	1107 17:30		
Cadmium, Total		ND ND		mg/1		0.005		200.7	1107 17:30		
Chromium, Total		ND ND		mg/l mg/l		0.005 0.01		200.7	1107 17:30		
Copper, Total		ND		_				200.7	1107 17:30		
Lead, Total		ND		mg/l		0.005		200.7	1107 17:30		
Nickel, Total		ND ND		mg/l mg/l		0.010 0.025		200.7	1107 17:30		
Selenium, Total		ND ND		mg/l				200.7	1107 17:30		
Silver, Total		ND		mg/1		0.010 0.007		200.7	1107 17:30		
Thallium, Total		ND		mg/l		0.007		200.7	1107 17:30		
Zinc, Total		ND		mg/1		0.020		200.7	1107 17:30		
		MD		mg/ I		0.000	19	200.7	1107 17:30	1108 12:5	OM L

# ALPHA ANALYTICAL LABORATORIES QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0715972

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP ANAL	ID
Total Metals	Blank Analysis for s	sample(s) 0	1 (WG301	147-4)		**
Mercury, Total	ND	mg/l	0.000	2 3 245.1	1106 18:30 1107 12:	37 RC

## ALPHA ANALYTICAL LABORATORIES ADDENDUM I

#### REFERENCES

- 3. Methods for the Determination of Metals in Environmental Samples, Supplement I. EPA/600/R-94/111. May 1994.
- Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020. Revised March 1983.
- 19. Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.
- 30. Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.
- 44. Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.
- 74. Method 1664, Revision A: N-Hexane Extractable Material (HEM; Oil & Grease) and Silica Gel Treated N-Hexane Extractable Material (SGT-HEM; Non-polar Material) by Extraction and Gravimetry, EPA-821-R-98-002, February 1999.

#### GLOSSARY OF TERMS AND SYMBOLS

REF Reference number in which test method may be found.

METHOD Method number by which analysis was performed.

ID Initials of the analyst.

ND Not detected in comparison to the reported detection limit.

NI Not Ignitable.

ug/cart Micrograms per Cartridge.

H The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

#### LIMITATION OF LIABILITIES

Alpha Analytical, Inc. performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical, Inc., shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical, Inc. be held liable for any incidental consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical, Inc.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding times and splitting of samples in the field.

ALPHA Job #: Lot from from from from from from from from	Sample Specific Comments  Complete	Please print clearly, legibly and completely. Samples can not be logget in and turnaround time clock will not start until any ambiguitles are resolved. All samples submitted are \$\infty\$ \(\infty\$ \infty\$ \infty\$ \(\infty\$ \infty\$ \infty\$ \infty\$ \infty\$ \(\infty\$ \infty\$ \infty\$ \infty\$ \infty\$ \infty\$ \(\infty\$ \infty\$ \in
Date Rec'd in Lab: 1○ 25 ○   ReportInformation - Data Deliverables  □ FAX □ EMAIL □ ADEx □ Add'I Deliverables  Regulatory Requirements/Report Limits  State /Fed Program  MAMCPPHESUMPTIVECEHTAINTY CTREASONABLE CONFIDENCE PROTOCOLS  □ Yes □ No Are CTRCP (Reasonable Confidence Protocols) Required?	SISY JANA SONAT GOD ENCY SONAT GOD ENCY SISY JANA SONAT GOD ENCY SONAT GOD ENCY S	P P P P P P P P P P P P P P P P P P P
Project Information Project Location: Quarterly (4 ^{rh} ) Project Location: Solout fall Project #: Project #: Project #: Project Manager   Ketth Levisif & ALPHA Guote #:	Date Due:  Time:  Date Due:  Time:    Date Due:   Pha	Relinquished By:  Return Reward 10-26-07 11:50
CHAIN OF CUSTOCHOL MA  Tel. 508-698-9220  Fix. 508-698-9220  Fix. 508-698-9220  Fix. 508-698-9220  Fix. 508-698-9220  Fix. 508-698-9300  Fix. 508-	efvig: $\langle 4^{\circ}$ C $\rangle$ $\langle 4^{\circ}$ C $\rangle$ Sample D $\langle 4^{\circ}$ C $\langle 4^{\circ}$ C $\langle 4^{\circ} \rangle$ C $\langle 4^{\circ} \rangle$ $\langle 4$	PLEASE ANSWER QUESTIONS ABOVEL IS YOUR PROJECT MA MCP or CT RCP? FORM NO:01-01 (fev.30-JUL-07)

### ALPHA ANALYTICAL LABORATORIES

#### Eight Walkup Drive Westborough, Massachusetts 01581-1019 (508) 898-9220 www.alphalab.com

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

#### CERTIFICATE OF ANALYSIS

Client: Rohm & Haas

Laboratory Job Number: L0710204

Address: 455 Forest Street

Marlboro, MA 01752

Date Received: 18-JUL-2007

Mr. Keith LeMaire Attn:

Date Reported: 31-JUL-2007

Project Number:

Delivery Method: Client

Site:

QUARTERLY (3RD)

ALPHA SAMPLE NUMBER CLIENT IDENTIFICATION SAMPLE LOCATION L0710204-01 A-D COMPOSITE SO1 OUTALL L0710204-02 E-H GRAB SO1 OUTALL

Authorized by: Technocal Director

07310716:14 Page 1 of 10

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

# ALPHA ANALYTICAL LABORATORIES NARRATIVE REPORT

Laboratory Job Number: L0710204

The samples were received in accordance with the chain of custody and no significant deviations were encountered during preparation or analysis unless otherwise noted below.

Sample Receipt

The samples were received at the laboratory above the required temperature range. The samples were transported to the laboratory in a cooler with ice and delivered directly from the sampling site.

BOD

L0710204-01 has an elevated detection limit due to the 25x dilution required by the elevated concentration of BOD in the sample.

Total Phosphorus

 ${\tt L0710204-01}$  has an elevated detection limit due to the 5x dilution required for the sample to fall within the calibration curve.

Ammonia

A matrix spike was not performed due to laboratory error.

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number: L0710204-01

A-D COMPOSITE

Date Collected: 18-JUL-2007 09:00

Date Received: 18-JUL-2007

Sample Matrix:

WATER

Date Reported: 31-JUL-2007

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 4-Plastic

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DA	ATE	ID
					PREP	ANAI,	
Solids, Total Suspended	32	mg/l	5.0	30 2540D		0723 14:00	) st
Nitrogen, Ammonia	18.3	mg/l	0.400	30 4500NH3-BE		0730 17:59	9 TV
Phosphorus, Total	3.0	mg/l	0.05	30 4500P-E		0724 15:00	) HS
Chemical Oxygen Demand	260	mg/l	20	44 410.4		0723 14:00	D HG
BOD, 5 day	240	mg/l	50	30 5210B	0719 15:20	0724 13:30	) HS
Total Metals				19 200.7			
Aluminum, Total	0.11	mg/l	0.10	19 200.7	0720 16:30	0724 16:50	D AI
Antimony, Total	ND	mg/l	0.050	19 200.7	0720 16:30	0724 16:50	D AI
Arsenic, Total	ND	mg/l	0.005	19 200.7	0720 16:30	0724 16:50	IA 0
Beryllium, Total	ND	mg/l	0.005	19 200.7	0720 16:30	0724 16:50	IA C
Cadmium, Total	ND	mg/l	0.005	19 200.7	0720 16:30	0724 16:50	D AI
Chromium, Total	ND	mg/1	0.01	19 200.7	0720 16:30	0724 16:50	IA C
Copper, Total	0.047	mg/l	0.010	19 200.7	0720 16:30	0724 16:50	O AI
Lead, Total	ND	mg/l	0.010	19 200.7	0720 16:30	0724 16:50	D AI
Mercury, Total	ND	mg/l	0.0002	3 245.1	0723 16:35	0724 09:4	I DM
Nickel, Total	ND	mg/1	0.025	19 200.7	0720 16:30	0724 16:5	IA C
Selenium, Total	ND	mg/l	0.010	19 200.7	0720 16:30	0724 16:5	O AI
Silver, Total	ND	${\sf mg/1}$	0.007	19 200.7	0720 16:30	0724 16:5	IA C
Thallium, Total	ND	${\sf mg/1}$	0.020	19 200.7	0720 16:30	0724 16:5	) AI
Zinc, Total	ND	${\sf mg/l}$	0.050	19 200.7	0720 16:30	0724 16:5	O AI

Comments: Complete list of References and Glossary of Terms found in Addendum I

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number: L0710204-02

Date Collected: 18-JUL-2007 09:00

E-H GRAB Sample Matrix: WATER

Date Received : 18-JUL-2007

Date Reported : 31-JUL-2007

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 3-Amber, 1-Plastic

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE ID
					PREP ANAL
Cyanide, Total	ND	mg/l	0.005	30 4500CN-CE	0724 15:55 0725 17:41 DD
Oil & Grease, Hem-Grav	16	mg/l	4.4	74 1664A	0730 11:30 0731 12:00 AT
Phenolics, Total	0.05	mg/l	0.03	4 420.1	0719 16:25 TH

Comments: Complete list of References and Glossary of Terms found in Addendum  ${\tt I}$ 

# ALPHA ANALYTICAL LABORATORIES QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Cyanide, Total for sample(s) 02 (L0710221-03, WG288122-3) manide, Total	Parameter	Value 1	Value 2	Units	RPD	RPD Limits
Cyanide, Total for sample(s) 02 (L0710221-03, WG288122-3) ranide, Total 0.010 ND mg/1 NC  Nitrogen, Ammonia for sample(s) 01 (L0710654-01, WG288801-3) recogn, Ammonia 12.9 13.1 mg/1 2 20  Phosphorus, Total for sample(s) 01 (L0710212-02, WG288133-3) recognorus, Total for sample(s) 01 (L0710212-02, WG288133-3) recognorus, Total for sample(s) 01 (L0710215-01, WG287981-4) remical Oxygen Demand for sample(s) 01 (L0710215-01, WG287981-4) remical Oxygen Demand 930 1000 mg/1 7 20  BOD, 5 day for sample(s) 01 (L0710212-01, WG287632-3) recognorus, Total for sample(s) 02 (L0709434-69, WG288840-3) remical Oxygen Demand 930 mg/1 NC 18  Phenolics, Total for sample(s) 02 (L0710276-01, WG287695-4) remolics, Total for sample(s) 01 (L0710250-01, WG287695-4) remolics, Total ND ND mg/1 NC 12  Total Metals for sample(s) 01 (L0710250-01, WG287686-1) resonic, Total ND ND mg/1 NC 12  Total Metals for sample(s) 01 (L0710250-01, WG287836-1) remolics, Total ND ND mg/1 NC 12  resonic, Total ND ND mg/1 NC 12  recognorus, Total ND ND Mg ND mg/1 NC 12  recognorus, Total ND ND Mg ND Mg ND	Solids, Total	Suspended f	or sample(s	) 01 (L0710	263-01,	WG287940-2)
Nitrogen, Ammonia for sample(s) 01 (L0710654-01, WG288801-3)	Solids, Total Suspended	1500	1600	mg/l	6	32
Nitrogen, Ammonia   12.9   13.1   mg/l   2   20	Cyanide,	Total for sa	mple(s) 02	(L0710221-0	)3, WG288	3122-3)
Phosphorus, Total for sample(s) 01 (L0710212-02, WG288133-3)	Cyanide, Total	0.010	ND	mg/l	ИС	
Phosphorus, Total for sample(s) 01 (L0710212-02, WG288133-3) and property and prope	Nitrogen,	Ammonia for	sample(s) C	)1 (L0710654	-01, WG2	288801-3)
Chemical Oxygen Demand for sample(s) 01 (L0710215-01, WG287981-4) Demical Oxygen Demand 930 1000 mg/l 7 20  BOD, 5 day for sample(s) 01 (L0710212-01, WG287632-3) DD, 5 day 120 130 mg/l 8 35  Oil & Grease, Hem-Grav for sample(s) 02 (L0709434-69, WG288840-3) DD, 5 day ND ND mg/l NC 18  Phenolics, Total for sample(s) 02 (L0710276-01, WG287695-4) DD, ND ND mg/l NC 12  Total Metals for sample(s) 01 (L0710250-01, WG287836-1) DD, ND ND mg/l NC DD, ND mg/l NC	Nitrogen, Ammonia	12.9	13.1	mg/l	2	20
Chemical Oxygen Demand for sample(s) 01 (L0710215-01, WG287981-4) nemical Oxygen Demand 930 1000 mg/l 7 20  BOD, 5 day for sample(s) 01 (L0710212-01, WG287632-3) mg/l 8 35  Oil & Grease, Hem-Grav for sample(s) 02 (L0709434-69, WG288840-3) mg/l NC 18  Phenolics, Total for sample(s) 02 (L0710276-01, WG287695-4) mg/l NC 12  Total Metals for sample(s) 02 (L0710276-01, WG287695-4) mg/l NC 12  Total Metals for sample(s) 01 (L0710250-01, WG287836-1) mg/l NC 12  Total Metals for sample(s) 01 (L0710250-01, WG287836-1) mg/l NC mg/lium, Total ND ND mg/l NC mg/lium, Total ND ND mg/l NC mg/l NC mg/lium, Total ND ND mg/l NC mg/l NC mg/lium, Total ND ND mg/l NC	Phosphorus	, Total for	sample(s) (	)1 (L0710212	2-02, WG2	288133-3)
BOD, 5 day for sample(s) 01 (L0710212-01, WG287632-3) DD, 5 day  BOD, 5 day for sample(s) 01 (L0710212-01, WG287632-3) DD, 5 day  Oil & Grease, Hem-Grav for sample(s) 02 (L0709434-69, WG288840-3) DD, 5 day  Oil & Grease, Hem-Grav for sample(s) 02 (L0709434-69, WG288840-3) DD, 5 day  Phenolics, Total for sample(s) 02 (L0710276-01, WG287695-4) DD, ND  DD, ND	Phosphorus, Total	0.06	0.06	mg/l	3	20
BOD, 5 day for sample(s) 01 (L0710212-01, WG287632-3) DD, 5 day  DO, 6 day  DO, 7 day  D	Chemical Oxyg	en Demand fo	r sample(s)	01 (L07102	215-01, 9	√G287981-4)
OD, 5 day  Oil & Grease, Hem-Grav for sample(s) O2 (LO709434-69, WG288840-3) Oil & Grease, Hem-Grav ND ND mg/l NC 18  Phenolics, Total for sample(s) O2 (LO710276-01, WG287695-4) Menolics, Total ND ND mg/l NC 12  Total Metals for sample(s) O1 (LO710250-01, WG287836-1) Mitimony, Total ND ND mg/l NC Mitimony, Total ND ND ND Mg/l NC Mitimony, Total ND	Chemical Oxygen Demand	930	1000	mg/l	7	20
Oil & Grease, Hem-Grav for sample(s) 02 (L0709434-69, WG288840-3) 1 & Grease, Hem-Grav ND ND mg/l NC 18  Phenolics, Total for sample(s) 02 (L0710276-01, WG287695-4)  Menolics, Total ND ND mg/l NC 12  Total Metals for sample(s) 01 (L0710250-01, WG287836-1)  Mitimony, Total ND ND mg/l NC  Mersenic, Total ND ND	BOD, 5	day for samp	le(s) 01 (I	.0710212-01,	WG28763	32-3)
Phenolics, Total for sample(s) 02 (L0710276-01, WG287695-4) menolics, Total ND ND mg/l NC 12  Total Metals for sample(s) 01 (L0710250-01, WG287836-1) mitimony, Total ND ND mg/l NC	BOD, 5 day	120	130	mg/l	8	35
Phenolics, Total for sample(s) 02 (L0710276-01, WG287695-4) menolics, Total ND ND mg/l NC 12  Total Metals for sample(s) 01 (L0710250-01, WG287836-1) mitimony, Total ND ND mg/l NC menolics, Total ND ND ND Mg/l NC menolics, Total ND ND ND Mg/l NC	Oil & Grease,	Hem-Grav fo	r sample(s)	02 (L07094	134-69, V	√G288840-3)
Total Metals for sample(s) 01 (L0710250-01, WG287836-1)  Itimony, Total  ND  ND  Mg/l  NC  Senic, Total  ND  ND  Mg/l  NC	Oil & Grease, Hem-Grav	ИD	ND	mg/l	NC	18
Total Metals for sample(s) 01 (L0710250-01, WG287836-1)  Itimony, Total  ND  ND  Mg/l  NC  Senic, Total  ND  ND  Mg/l  NC	Phenolics,	Total for s	ample(s) 02	(L0710276-	-01, WG28	37695-4)
ntimony, Total ND ND mg/l NC msenic, Total ND ND mg/l NC msenic, Total ND ND mg/l NC msenic, Total ND ND mg/l NC msenicm, Total ND ND mg/l NC mromium, Total ND ND mg/l NC msenicm, Total ND ND	Phenolics, Total					
rsenic, Total ND ND mg/l NC mg/lium, Total ND ND mg/l NC mg/lium, Total ND ND mg/l NC mallium, Total ND ND mg/l NC mallium, Total ND ND mg/l NC mg/l N	Total M∈	tals for sam	ple(s) 01 (	[L0710250-01	l, WG2878	336-1)
eryllium, Total ND ND mg/l NC mdmium, Total ND ND mg/l NC mromium, Total ND ND mg/l NC mromium, Total ND ND mg/l NC mg	Antimony, Total			-	ИС	
admium, Total ND ND mg/l NC mromium, Total ND ND mg/l NC mromium, Total ND ND mg/l NC mallium, Total ND ND mg/l NC mg/	Arsenic, Total			-		
promium, Total ND ND mg/l NC ppper, Total ND ND mg/l NC pad, Total ND ND mg/l NC pad, Total ND ND mg/l NC pelenium, Total ND N				~		
opper, Total ND ND mg/l NC and, Total ND ND mg/l NC lckel, Total ND ND mg/l NC lckel, Total ND ND mg/l NC lckel, Total ND ND mg/l NC liver, Total ND ND mg/l NC liver, Total ND ND mg/l NC lnc, Total ND ND mg/l NC	Cadmium, Total			mg/l	ИC	
ead, Total ND ND mg/l NC lckel, Total ND ND mg/l NC elenium, Total ND ND mg/l NC ilver, Total ND ND mg/l NC nallium, Total ND ND mg/l NC inc, Total ND ND mg/l NC	Chromium, Total			_		
ickel, Total ND ND mg/l NC elenium, Total ND ND mg/l NC ilver, Total ND ND mg/l NC nallium, Total ND ND mg/l NC inc, Total ND ND mg/l NC	Copper, Total		ND	mg/l	NC	
elenium, Total ND ND mg/l NC ilver, Total ND ND mg/l NC nallium, Total ND ND mg/l NC inc, Total ND ND mg/l NC inc, Total ND ND mg/l NC	Lead, Total	ND	ND	mg/l	NC	
ilver, Total ND ND mg/l NC nallium, Total ND ND mg/l NC inc, Total ND ND mg/l NC	Nickel, Total	ND	ND	mg/l	ИС	
nallium, Total ND ND mg/l NC inc, Total ND ND mg/l NC	Selenium, Total	ND	ND	mg/l	NC	
inc, Total ND ND mg/l NC	Silver, Total	ND	ND	mg/l	NC	
	Thallium, Total	ND	ND	mg/l	NC	
Total Metals for sample(s) 01 (L0710461-01, WG288015-3)	Zinc, Total	ND	ИD	mg/l	NC	
	Total Me	tals for sam	ple(s) 01	(L0710461-0	l, WG2880	015-3)
ercury, Total ND ND mg/l NC	Mercury, Total	ND	ND	mg/l	NC	

# ALPHA ANALYTICAL LABORATORIES QUALITY ASSURANCE BATCH SPIKE ANALYSES

Parameter	% Recovery QC Criteria
Cyanide, Total	Cyanide, Total LCS for sample(s) 02 (WG288122-2) 103
N: Nitrogen, Ammon:	trogen, Ammonia LCS for sample(s) 01 (WG288801-2) 1a 90 80-120
Phosphorus, Tota	nosphorus, Total LCS for sample(s) 01 (WG288133-2) al 107 85-115
Cher Chemical Oxygen	mical Oxygen Demand LCS for sample(s) 01 (WG287981-2) Demand 98 95-105
BOD, 5 day	BOD, 5 day LCS for sample(s) 01 (WG287632-2) 99 85-115
Oil Oil & Grease, He	& Grease, Hem-Grav LCS for sample(s) 02 (WG288840-2) em-Grav 90 78-114
Phenolics, Total	Phenolics, Total LCS for sample(s) 02 (WG287695-2) 91 82-111
	Total Metals LCS for sample(s) 01 (WG287836-4)
Aluminum, Total	105
Antimony, Total	103
Arsenic, Total	105
Beryllium, Total Cadmium, Total	
Chromium, Total	114
Copper, Total	105 98
Lead, Total	102
Nickel, Total	102
Selenium, Total	112
Silver, Total	93
Thallium, Total	99
Zinc, Total	107
	Total Motale ICC for complete 01 (EC200015 1)
Mercury, Total	Total Metals LCS for sample(s) 01 (WG288015-1) 102
Cyanide, Cyanide, Total	Total SPIKE for sample(s) 02 (L0710221-05, WG288122-4) 76
Phosphorus, Tota	us, Total SPIKE for sample(s) 01 (L0710393-02, WG288133-4) al 99 80-120
Chemical Oxy Chemical Oxygen	ygen Demand SPIKE for sample(s) 01 (L0710416-01, WG287981-3) Demand 110 80-120

# ALPHA ANALYTICAL LABORATORIES QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0710204

Continued

Parameter	% Recovery QC Criteria
·	or sample(s) 01 (L0710212-02, WG287632-4)
BOD, 5 day	104 50-145
Oil & Grease, Hem-Grav SE	PIKE for sample(s) 02 (L0709434-70, WG288840-4)
Oil & Grease, Hem-Grav	90 78–114
Phenolics, Total SPIKE	G for sample(s) 02 (L0710276-04, WG287695-3)
Phenolics, Total	100 77-124
Total Metals SPIKE f Aluminum, Total Antimony, Total Arsenic, Total Beryllium, Total Cadmium, Total Chromium, Total Copper, Total Lead, Total Nickel, Total Selenium, Total Silver, Total	For sample(s) 01 (L0710250-01, WG287836-2) 105 101 105 104 110 100 98 99 98 112
Thallium, Total	98
Zinc, Total	102
Total Metals SPIKE i	for sample(s) 01 (L0710461-01, WG288015-2) 118

# ALPHA ANALYTICAL LABORATORIES QUALITY ASSURANCE BATCH BLANK ANALYSIS

PARAMETER	RESUL	T UNITS		RDL	REF	METHOD	DA PREP	TE Anz		IL
Blank	Analysis fo	r samnle(s)	01	(MC28794	0-11					
Solids, Total Suspended		mg/l	OI	5.0		2540D		0723	14:00	ST
-		J.								
Blank	Analysis fo	r sample(s)	02	(WG28812	2-1	)				
Cyanide, Total	ND	mg/l		0.005		4500CN-CE	0724 15:55	0725	17:32	DE
	Analysis fo		01							
Iitrogen, Ammonia	ND	mg/l		0.400	30	4500NH3-BE		0730 1	17:38	T
Blank	Analysis fo	r sample(s)	01	(WG28813	3-11	)				
Phosphorus, Total	ND	mg/l		0.01		4500P-E		0724	15:00	н
	Analysis fo	r sample(s)	01	(WG28798	1-1)	)				
Chemical Oxygen Demand	ND	mg/l		20.	44	410.4		0723	14:00	H
T 1 l-	71	7 / \	0.1	4770007.60						
BIANK BOD, 5 day	Analysis fo	r sampie(s)	UΙ	2.0		) 5210B	0719 15:20	8724	13-30	יט
	112	97 ±		2.0	50	32100	0/17 13.20	0724 .	13.50	12.
Blank	Analysis fo	r sample(s)	02	(WG28884	0-1)	)				
Oil & Grease, Hem-Grav	ND	mg/l		4.0	74	1664A	0730 11:30	0731	12:00	A7
Dlank	Analysis fo	m	00	(B)C207.C0						
Phenolics, Total	Analysis fo	r sampte(s) mg/l	ŲZ	0.03		) 420.1		0719 1	16.26	TI
<b>,</b>		g, ±		0.05	4	42.07.1		0719	10.23	• • •
	Analysis fo	r sample(s)	01	(WG28783	6-3)	)				
Cotal Metals					19	200.7				
Aluminum, Total	ND	mg/1		0.10	19	200.7	0720 16:30	0724	13:06	A
Antimony, Total	ИD	mg/l		0.050	19	200.7	0720 16:30	0724	13:06	Α
Arsenic, Total	ND	mg/l		0.005		200.7	0720 16:30	0724	13:06	A.
Beryllium, Total	ND	mg/l		0.005		200.7	0720 16:30			
Cadmium, Total Chromium, Total	ND	mg/l		0.005		200.7	0720 16:30			
Copper, Total	ND ND	mg/1		0.01		200.7	0720 16:30			
Lead, Total	ND	mg/l mg/l		0.010 0.010		200.7	0720 16:30			
Nickel, Total	ND	mg/1		0.010		200.7	0720 16:30			
Selenium, Total	ND	mg/1		0.025		200.7	0720 16:30			
		· ·		0.010		200.7	0720 16:30 0720 16:30			
•	1917	191017								23.
Silver, Total Thallium, Total	ND ND	mg/l mg/l		0.020		200.7	0720 16:30			

# ALPHA ANALYTICAL LABORATORIES QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0710204

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DA	re	ID
						PREP	ANAL	
Total Metals	Blank Analysis for sa	ample(s) 0	1 (WG288	015-4	)			
Mercury, Total	ND	mg/l	0.000	2 3	245.1	0723 16:35	0724 09:2	4 DM

# ALPHA ANALYTICAL LABORATORIES ADDENDUM I

#### REFERENCES

- 3. Methods for the Determination of Metals in Environmental Samples, Supplement I. EPA/600/R-94/111. May 1994.
- Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020. Revised March 1983.
- 19. Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.
- 30. Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.
- 44. Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.
- 74. Method 1664, Revision A: N-Hexane Extractable Material (HEM; Oil & Grease) and Silica Gel Treated N-Hexane Extractable Material (SGT-HEM; Non-polar Material) by Extraction and Gravimetry, EPA-821-R-98-002, February 1999.

#### GLOSSARY OF TERMS AND SYMBOLS

REF Reference number in which test method may be found.

METHOD Method number by which analysis was performed.

ID Initials of the analyst.

ND Not detected in comparison to the reported detection limit.

NI Not Ignitable.

ug/cart Micrograms per Cartridge.

#### LIMITATION OF LIABILITIES

Alpha Analytical, Inc. performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical, Inc., shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical, Inc. be held liable for any incidental consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical, Inc.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding times and splitting of samples in the field.

ALPHA JOB #: LO7 (0 204	Billing Information	Same as Client into PO#:				TIONSMISTER	uired?	nitted? en irements?		SAMPLE HANDLING STREET		/		(Pinase specify below)	Sample specific Confinents	A 35.00			2 2 2 3		1 (2 rg)		Please print clearly, legibly and comoletely. Samples can not be	logged in and turnaround time clock	1
Determent In July 10 7	Information - Data Deliverables	□ EMAIL	□ ADEx □ Add'l Deliverables	rements/Repo	State /Fed Program Criteria	MCPPRESUMPTIVEGERIAINTY-THESE QUESTIONS MUST BE ANSWERED	☐ Yes ☐ No Are MCP Analytical Methods Required?	☐ Yes ☐ No Are Drinking Water Samples Submitted? ☐ Yes ☐ No Have vou met minimum field OC remutements?		NU.		\2\\0\\\\.	( R ) ( R ) ( E	TO LOS HAN						>	>				TF (com) - 1 18107 113
PAGEOF		Quarrenty (	Project Location: Sel Outral		Project Manager: Keith Lawolle		Turn-Around Time		C KOSH (only continued if pre-approved!)	) Ime:		Reford < 4°C During Collection, stonage and Transfer		sampler's Initials	7 0900 F	3 e080	7-18-07 5800 E RL	0900 E	8100 E		7-1507 0900 E KU		IVECERTAINTY Container Type	emil/eteQ	7
	Westborough, MA 01581			Client: Robin + Hags Elec Mar Project #	STV	Ä		481-2755	orand Service	These samples have been previously analyzed by Alpha	Other Project Specific Requirements/Comments/Detection Limits:	4°C Duning Collection	10 AIRHA RUFO!	SampleID	A.	හ	J	Q	ш	ĮĮ.	エゅり		QUESTIONS ABOVE MUST BE ANSWERED FOR PRESUMPTIVE CERTAINTY	Relinanished By	Keral
	Eight Walkup Drive V	IEL: 508-898-9220	Offent Information	Client: Rashring #	Address: 455 Forest	Mariber	Phone: (508) 224-7177	Fax: (508) 4	Email;	☐ These samples have	Other Project Spea	Reford <		ALPHALab ID :	13.53E				120 TOES				QUESTIONS ABOVE	X007 31	

#### ALPHA ANALYTICAL LABORATORIES

# Eight Walkup Drive Westborough, Massachusetts 01581-1019 (508) 898-9220 www.alphalab.com

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

#### CERTIFICATE OF ANALYSIS

Client: Rohm & Haas Laboratory Job Number: L0705713

Address: 455 Forest Street

Marlboro, MA 01752 Date Received: 24-APR-2007

Attn: Mr. Keith LeMaire Date Reported: 18-JUN-2007

Project Number: EPA MUR Delivery Method: Client

Site: QUARTERLY (2ND)

ALPHA SAMPLE NUMBER CLIENT IDENTIFICATION SAMPLE LOCATION

L0705713-01 A-D COMPOSITE SOL OUTFALL
L0705713-02 E-H GRAB SOL OUTFALL

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized by: Zee M Polling
Technical Director

06180712:05 Page 1 of 10

# ALPHA ANALYTICAL LABORATORIES NARRATIVE REPORT

Laboratory Job Number: L0705713

Report Submission

This report replaces the report issued on May 7, 2007. The report has been revised to correct the method references for the analysis of BOD, Ammonia Nitrogen, Total Cyanide, Total Phosphorous and Total Suspended Solids.

The samples were received in accordance with the chain of custody and no significant deviations were encountered during preparation or analysis unless otherwise noted below.

Sample Receipt

The samples were received at the laboratory above the required temperature range. The samples were transported to the laboratory in a cooler with ice and delivered directly from the sampling site.

BOD

L0705713-01 has an elevated detection limit due to the 25x dilution required by the elevated concentration of BOD in the sample.

Total Phosphorus

L0705713-01 has an elevated detection limit due to the 25x dilution required for the sample to fall within the calibration curve.

### MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number: L0705713-01

Date Collected: 24-APR-2007 09:30

A-D COMPOSITE

Date Received: 24-APR-2007

Sample Matrix:

WATER

Date Reported: 18-JUN-2007

Condition of Sample: Satisfactory

Field Prep: None ,

Number & Type of Containers: 4-Plastic

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Solids, Total Suspended	32	mg/l	5.0	30 2540D		0425 07:45	5 DW
Nitrogen, Ammonia	24.6	mg/l	0.400	30 4500NH3-BE		0504 20:40	HG
Phosphorus, Total	3.7	mg/l	0.25	30 4500P-E		0426 15:00	нѕ
Chemical Oxygen Demand	210	mg/l	20	44 410.4		0503 12:55	o DW
BOD, 5 day	260	mg/l	50	30 5210B	0425 14:10	0430 15:20	) DM
Total Metals				19 200.7			
Aluminum, Total	0.12	mg/l	0.10	19 200.7	0427 15:45	0502 19:46	5 MG
Antimony, Total	ND	mg/1	0.050	19 200.7	0427 15:45	0502 19:46	5 MG
Arsenic, Total	ND	mg/l	0.005	19 200.7	0427 15:45	0502 19:46	6 MG
Beryllium, Total	ND	mg/l	0.005	19 200.7	0427 15:45	0502 19:46	5 MG
Cadmium, Total	ND	mg/l	0.005	19 200.7	0427 15:45	0502 19:46	5 MG
Chromium, Total	ND	mg/l	0.01	19 200.7	0427 15:45	0502 19:40	5 MG
Copper, Total	0.039	mg/l	0.010	19 200.7	0427 15:45	0502 19:46	5 MG
Lead, Total	ND	mg/l	0.010	19 200.7	0427 15:45	0502 19:46	5 MG
Mercury, Total	ND	mg/l	0.0002	4 245.2	0502 16:50	0503 15:58	3 DM
Nickel, Total	ND	mg/l	0.025	19 200.7	0427 15:45	0502 19:46	5 MG
Selenium, Total	ND	mg/l	0.010	19 200.7	0427 15:45	0502 19:46	5 MG
Silver, Total	ND	mg/l	0.007	19 200.7	0427 15:45	0502 19:40	5 MG
Thallium, Total	ND	mg/l	0.020	19 200.7	0427 15:45	0502 19:46	5 MG
Zinc, Total	ND	mg/l	0.050	19 200.7	0427 15:45	0502 19:46	5 MG

Comments: Complete list of References and Glossary of Terms found in Addendum  ${\tt I}$ 

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#### ALPHA ANALYTICAL LABORATORIES CERTIFICATE OF ANALYSIS

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number: L0705713-02

713-02 Date Collected: 24-APR-2007 09:30

Sample Matrix: Beh GRAB Date Received : 24-APR-2007 Date Reported : 18-JUN-2007

Condition of Sample: Satisfactory Field Prep: None

Number & Type of Containers: 3-Amber, 1-Plastic

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE ID PREP ANAL
Cyanide, Total	ND	mg/l	0.005	30 4500CN-CE	0503 15:30 0503 19:15 DD
Oil & Grease, Hem-Grav	17	mg/l	4.0	74 1664A	0503 10:30 0504 09:30 AT
Phenolics, Total	ND	mg/l	0.03	4 420.1	0501 15:00 AT

Comments: Complete list of References and Glossary of Terms found in Addendum I

06180712:05 Page 4 of 10

## ALPHA ANALYTICAL LABORATORIES QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Laboratory Job Number: L0705713

Parameter	Value 1	Value 2	Units	RPD	RPD Limits
Solids, Total	Suspended f	or sample(s	) 01 (L070	5769-01.	WG277947-2)
olids, Total Suspended	110	90	mg/l	20	20
Cyanide,	Total for sa	mple(s) 02	(L0705981-	02. WG279	9046-4)
Cyanide, Total	ИD	ND	mg/l	NC	30
Nitrogen,	Ammonia for	sample(s) 0	1 (L070584	1-01, WG2	279262-4)
Nitrogen, Ammonia	83.4	83.4	${\sf mg/l}$	0	20
Phosphorus	, Total for	sample(s) 0	1 (L070572	8-03, WG2	278226-3)
Phosphorus, Total	0.26	0.26	mg/l	0	20
Chemical Oxyg	en Demand fo	or sample(s)	01 (L0705	899-07, W	NG278978-4)
Chemical Oxygen Demand	ND	ND	mg/l	NC	·
BOD, 5	day for samp	ole(s) 01 (I	0705719-01	. WG27800	)4-4)
BOD, 5 day	300	300	mg/l	0	35
Oil & Grease,	Hem-Grav fo	or sample(s)	02 (L0706	172-02. ¥	√G279059-4)
Oil & Grease, Hem-Grav	13	14	mg/l	7	18
Phenolics,	Total for s	sample(s) 02	(L0705713	-02, WG2	78824-4)
Phenolics, Total	ND	ND	mg/l	NC	12
Total Me	tals for sam	ple(s) 01 (	L0705664-0	2, WG2783	367-1)
Cadmium, Total	ND	ND	mg/l	NC	
Chromium, Total	ND	ND	mg/l	ИС	
Copper, Total	0.013	0.012	mg/l	2	
Lead, Total	ND	ND	mg/l	NC	
Nickel, Total	ND	ND	mg/l	NC	
Silver, Total	0.007	0.007	mg/l	2	
Zinc, Total	ND	ND	mg/l	ИС	
Total Me	tals for sam	nple(s) 01 (	L0705713-0	1, WG2785	910-3)
Mercury, Total	ND	ND	mg/l	NC	

## ALPHA ANALYTICAL LABORATORIES QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0705713

Parameter	% Recovery QC Criteria
Cyanide Cyanide	e, Total LCS for sample(s) 02 (WG279046-1) 102 90-110
ojaniae, rotar	102 90-110
Nitrogen, Nitrogen, Ammonia	Ammonia LCS for sample(s) 01 (WG279262-2) 93 80-120
Phosphorus, Total	us, Total LCS for sample(s) 01 (WG278226-2) 104 85-115
Chemical Ox Chemical Oxygen Demand	ygen Demand LCS for sample(s) 01 (WG278978-2) 97
BOD.	5 day LCS for sample(s) 01 (WG278004-2)
BOD, 5 day	110 85-115
Oil & Greas	se, Hem-Grav LCS for sample(s) 02 (WG279059-2) 90 78-114
Phenolics, Total	es, Total LCS for sample(s) 02 (WG278824-2) 96 82-111
Total	Metals LCS for sample(s) 01 (WG278367-4)
Aluminum, Total	100
Antimony, Total	99
Arsenic, Total	1.00
Beryllium, Total Cadmium, Total	102
	102
Chromium, Total Copper, Total	95 92
Lead, Total	92
Nickel, Total	94
Selenium, Total	102
Silver, Total	96
Thallium, Total	98
Zinc, Total	98
Total	Metals LCS for sample(s) 01 (WG278910-1)
Mercury, Total	101
Cvanide, Total	SPIKE for sample(s) 02 (L0705713-02, WG279046-3)
Cyanide, Total	99 80-120
Nitrogen, Ammonia Nitrogen, Ammonia	a SPIKE for sample(s) 01 (L0705667-01, WG279262-3) 102 75-125
Phosphorus, Total	al SPIKE for sample(s) 01 (L0705711-01, WG278226-4) 98 80-120

## ALPHA ANALYTICAL LABORATORIES QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0705713

Continued

Parameter	% Recovery QC Criteria
Chemical Oxygen Demand SPIKE 1	for sample(s) 01 (L0705899-07, WG278978-3)
Chemical Oxygen Demand	108
BOD, 5 day SPIKE for sam	mple(s) 01 (L0705719-03, WG278004-3)
BOD, 5 day	118 50-145
Oil & Grease, Hem-Grav SPIKE 1 Oil & Grease, Hem-Grav	for sample(s) 02 (L0706106-01, WG279059-3) 84 78-114
Phonolics Total SPIVE for	armple (a) 02 /ID705764 04 WC270024 2)
Phenolics, Total SPIKE for Phenolics, Total	sample(s) 02 (L0705764-04, WG278824-3) 94 77-124
,	
	ample(s) 01 (L0705664-02, WG278367-2)
Aluminum, Total	105
Antimony, Total	100
Arsenic, Total	101
Beryllium, Total	103
Cadmium, Total	104
Chromium, Total	95
Copper, Total Lead, Total	92 98
Nickel, Total	96 ,
Selenium, Total	103
Silver, Total	96
Thallium, Total	99
Zinc, Total	101
	ample(s) 01 (L0705713-01, WG278910-2)
Mercury, Total	123

## ALPHA ANALYTICAL LABORATORIES QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0705713

PARAMETER	RESULT	UNITS	RI	OL REF	METHOD	DA PREP	TE ANAL	ID
	Analysis for	sample(s) (	)1 (W	3277947-1	.)			
Solids, Total Suspended	ND	mg/l	5	.0 з	0 2540D		0425 07:45	5 DW
Blank	Analysis for	sample(s) (	)2 (W	G279046-2	?)			
Cyanide, Total	ND	mg/l	0	. 005 з	0 4500CN-CE	0503 15:30	0503 19:11	l DE
Blank	Analysis for	sample(s) (	01 (W	G279262-1	.)			
Nitrogen, Ammonia	ND	mg/l	0	.400 3	0 4500NH3-BE		0504 19:56	5 HG
	Analysis for	sample(s) (	)1 (W	G278226-1	.)			
Phosphorus, Total	ND	mg/l	0	.01 з	0 4500P-E		0426 15:00	) HS
	Analysis for	-						
Chemical Oxygen Demand	ND	mg/l	21	O. 4	4 410.4		0503 12:55	DV
	Analysis for	sample(s) (	) (W	3278004-1	L)			
BOD, 5 day	ND	mg/l	2	.0 з	0 5210B	0425 14:10	0430 15:20	) DW
Blank	Analysis for	sample(s) (	02 (W	3279059-1	L)			
Oil & Grease, Hem-Grav	ND	mg/l	4	. 0 7	4 1664A	0503 10:30	0504 09:30	) Ai
Blank	Analysis for	sample(s) (	02 (W	327882 <b>4</b> -1	L)			
Phenolics, Total	ND	mg/l	0	.03 4	420.1		0501 15:00	) AI
Blank Total Metals	Analysis for	sample(s) (	01 (W					
Total metals				1	9 200.7			
Aluminum, Total	ND	mg/l			9 200.7	0427 15:45	0502 19:20	6 MC
Antimony, Total	ND	mg/l			9 200.7	0427 15:45		
Arsenic, Total	ND	mg/l			9 200.7		0502 19:20	
Beryllium, Total	ND	mg/l			9 200.7		0502 19:20	
Cadmium, Total Chromium, Total	ND	mg/l			9 200.7		0502 19:20	
Copper, Total	ND	mg/l			9 200.7		0502 19:20	
Lead, Total	ND ND	mg/l			9 200.7		0502 19:20	
Nickel, Total	ND	mg/l mg/l			.9 200.7 .9 200.7		0502 19:20	
Selenium, Total	ND	mg/l			9 200.7		0502 19:20 0502 19:20	
	ND	mg/l			9 200.7		0502 19:20	
Silver, Total			v		J 200.1	O451 TO:40	マンマム エフェとり	u Pi€
Silver, Total Thallium, Total	ND	mg/l			9 200.7	0427 15.46	0502 19:20	6 M

## ALPHA ANALYTICAL LABORATORIES QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0705713

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE ID PREP ANAL
Total Metals	Blank Analysis for s	ample(s) 0	1 (WG278	910-4)	
Mercury, Total	ND	mg/l	0.000	2 4 245.2	0502 16:50 0503 15:54 DM

## ALPHA ANALYTICAL LABORATORIES ADDENDUM I

#### REFERENCES

- Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020. Revised March 1983.
- 19. Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.
- 30. Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.
- 44. Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.
- 74. Method 1664, Revision A: N-Hexane Extractable Material (HEM; Oil & Grease) and Silica Gel Treated N-Hexane Extractable Material (SGT-HEM; Non-polar Material) by Extraction and Gravimetry, EPA-821-R-98-002, February 1999.

#### GLOSSARY OF TERMS AND SYMBOLS

REF Reference number in which test method may be found.

METHOD Method number by which analysis was performed.

ID Initials of the analyst.

ND Not detected in comparison to the reported detection limit.

NI Not Ignitable.

ug/cart Micrograms per Cartridge.

#### LIMITATION OF LIABILITIES

Alpha Analytical, Inc. performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical, Inc., shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical, Inc. be held liable for any incidental consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical, Inc.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding times and splitting of samples in the field.

06180712:05 Page 10 of 10

ALPHA JOB #: UD 705713	Effling Information  Same as Client Info PO#  FASONABLE CONFIDENCE PROTOCOLS  Required?	Are CT KCP (Reasonable Confidence Protocols) Negatives:	Sample Specific Comments Sample Specific Comme	Please print clearly, legibly and completely. Samples can not be togged in and turnaround time clock Date/Time will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Paymert Terms. See reverse side.
Date Rec'd in Lab:	Report Information - Data Deliverables Billing Information    PAX	TOP 13 TANALYSIS  18 521 797  18 521 797  18 521 797		PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP
CUSTODY PAGE / OF /	Project Information Project Name: Quanter 1y (14) Project Location: Sol Outfall Project Manager: Keith LeiMair ALPHA Quote #: Turn-Around Time	En previously analyzed by Alpha  Tic Requirements/Comments/Detection Limits:  During Collection, 57000, 57000, 1000  To AIPHA Reference of Temp 40°F		Relinquished By:  Relinquished By:  A y y y y 1 0 5 X
CHAIN OF CUST	CHENT INTO MARINA TEL: 508-822-9300 FAX: 508-820-930 FAX: 508-920 FAX: 508-920-939-9193 FAX: 508-920-939-9193 FAX: 508-920-930-930 CHENT INTO MARITON CHENT: Rehart Hack Flet Marte Address: 455 Fove 5 St Phone: 508-329-217	shave be Specific	ALPHA Labilo Sample ID (Lab Use Only) A S7/3, A A A A A A A A A A A A A A A A A A A	PLEASE ANSWER QUESTIONS ABOVE!  IS YOUR PROJECT  MA MCP or CT RCP?  FORMING 10-101 (fey 10-007-105)

#### Attachment B

#### **POTW Sewer Use Permits**

- Main Pretreatment Facility
- ATC Pretreatment System





## S. Croce

# City of Marlborough Westerly Wastewater Treatment Plant 303 Boundary Street Marlborough, MA 01752

November 2, 2006

Sarita Croce Rohm and Haas Electronic Materials, LLC 455 Forest Street Marlborough, MA 01752

Dear Sarita Croce;

Enclosed is your updated permit. All conditions of this permit shall take effect on the <u>Effective Date</u> as stated on the permit.

The only exception is the BOD₅, <u>Daily Maximum Limit</u>, which will become effective at a later date.

If you have any questions, please contact me @508-624-6919.

Respectfully,

Roland Gould, IPP Coordinator

EFFECTIVE DATE: EXPIRATION DATE:

12/04/06 12/03/2011 **PERMIT # SIU4817950** 

**Facility Name:** 

Rohm and Haas Electronic Materials, LLC

**455 Forest Street** 

Marlborough, MA 01752

#### I. **DEFINITIONS**

Unless the context clearly indicates otherwise, the meaning of the terms or abbreviations used in this discharge permit shall be defined in exhibit " A ".

#### II. GENERAL CONDITIONS

- a. All discharges authorized herein shall be consistent with the terms of this permit and the Marlborough Sewer Regulations, Section 161-1 et. seq. The discharge of any pollutant more frequently than or at a level in excess of that identified and authorized by this permit shall constitute a violation of the terms and conditions of this permit. Such a violation may result in the imposition of civil and / or criminal penalties as provided for in Marlborough's Sewer Regulations, and applicable state and federal clean water laws. Modifications, additions and / or expansions that increase or decrease the quality and / or quantity of wastewater discharged to the Wastewater Facilities must be reported to the City of Marlborough's Industrial Pretreatment Coordinator, in writing, and this permit may then be modified or reissued to reflect such changes. No change in the permittee's discharge may be made unless reported to, and approved by the City. In no case shall new connections, increased flows, or significant changes in effluent quantity and / or quality be permitted, unless permitted by the City.
- b. This permit may be modified, suspended, or revoked in whole or in part during its term, without limitation, for the following reasons:
  - 1. Violation of any term or condition of this permit;
  - 2. Obtaining permit by misrepresentation or failure to disclose fully all-relevant facts.
  - 3. A change in conditions or the existence of a condition which requires either a temporary or permanent reduction or elimination of the authorized discharge.
  - 4. Promulgation of a more stringent pretreatment standard by State or Federal agencies having jurisdiction over receiving waters. Permits modified under this section may include implementation schedules, self monitoring requirements, revised effluent limitations, and other provisions necessary to assure compliance.
  - 5. Violation of the Marlborough Sewer Regulations, or other applicable laws.
  - c. The permittee shall permit the City of Marlborough Department of Public Works and

- such conditions have been corrected, the duration of the period of non-compliance;
- 3. Steps taken by the permittee to reduce and eliminate the non-complying discharge;
- 4. Steps to be taken by the permittee to prevent recurrence of the condition of non-compliance.

The City reserves all rights and remedies that it has under or by reason of any statutory law, ordinance, regulation, or common law, or other applicable law, to cure any breach of this agreement or to enforce any penalty for the breach thereof.

- i. <u>Emergency Action Electric Power Failure:</u> The permittee shall provide an alternative source of power for the operation of its pretreatment facilities or shut down its industrial operation during a power failure. The alternative power supply, whether from a generating unit located at the plant site or purchased from an independent source of electricity, must be separate from the existing power source used to operate the pretreatment facilities.
- j. <u>Bypasses</u>, <u>Slug Loads</u>, <u>Spills</u>: Slug loads, spills or bypass of any discharge from its pretreatment facilities utilized by the permittee to maintain compliance with the terms and conditions of this permit is prohibited, except where unavoidable to prevent loss of life. The permittee shall follow the requirements in 40 CFR Part 403, including section 403.16 (c) (3) which includes the verbal notification of the Pretreatment Coordinator within 24 hours, and in writing, of each such slug, spill or bypass in accordance with the procedure specified in part: "h. <u>Non-Compliance</u>" of this same section of this permit.
- k. Revisions: The City of Marlborough reserves the right to make appropriate revisions to this permit in order to establish any appropriate effluent limitations, management practices, operational procedures, schedule or compliance, or other provisions which may be authorized under Federal, State or City law in order to bring all such discharges into compliance with these acts.
- 1. **Reapplication:** If the permittee desires to continue to discharge after the expiration of this permit, it shall reapply on the application forms then in use at least one hundred eighty (180) days before the Permit expires. Under no circumstances shall the permittee continue to discharge after the expiration of the Permit.

#### III. SPECIAL CONDITIONS

- a. The permittee is required to connect their wastewater facilities to the public sewer in accordance with the provisions of the Marlborough Sewer Use regulations, and other applicable laws.
- b. The Permittee is authorized to discharge only wastewater whose effluent and other characteristics shall not:
  - (i) exceed the values listed in Section VII. MONITORING REQUIREMENTS or,

- f. Sampling and Analysis: The sampling, preservation, handling, and analytical methods used must conform to the Approved Methods in 40 CFR 136.
- g. All limitations as given in this permit are conditional, and may be revised, should the concentrations prove detrimental to the proper operation and maintenance of the Marlborough Treatment Facilities. In addition to costs and charges under Section IV a. and IV b., upon notification to reduce the specified concentrations, the Permittee shall be responsible for all costs incurred at the Treatment Facilities, which resulted because of excessive concentrations.
- h. All industries are required to resample and analyze for any parameter that is in violation of their permit within 30 (thirty) days, and submit the test results to the IPP coordinator.

#### VI IMPLEMENTATION SCHEDULE

#### a. The permittee shall:

- 1. Ensure that a functional composite sampler is available for the collection of a representative effluent sample.
- 2. Operate a pH meter with a continuous chart recorder which shall be maintained and calibrated at least biweekly.
- 3. Operate a flow meter for continuous measurement of discharge volume, which shall be calibrated at least annually.

#### b. Pretreatment

The permittee shall achieve compliance with the final effluent limitations as delineated below.

1. This facility is subject to the terms and conditions set forth in 40 CFR part 403.

*Example: If there is a requirement for quarterly phosphorus sampling, a sample has to be taken in January, February or March and the results are to be received by the IPP coordinator by April 15th. This scenario is the same for all calendar quarters.

#### Municipal Limitations / Conditions / General comments

- 1. Adhere to the City of Marlborough's Sewer Regulations, and all state and federal laws
- 2. Ensure that a functional composite sampler is available for the collection of a representative effluent sample.
- 3. Ensure that the pH meter with a continuous chart recorder is calibrated at least biweekly.
- **4.** Ensure that the flow meter for continuous measurement of discharge volume is calibrated at least annually.
- 5. The wastewater discharge shall not contain a visible oil sheen or foam at any time. In addition, the wastewater discharge shall not contain any foaming agents in quantities that would manifest themselves either in the immediate wastewater discharge or in downstream locations, including without limitation, the City's wastewater treatment plant or in downstream waters.
- 6. It shall be considered a violation of this permit if any foaming agents, or other wastewater constituents result in, or contribute to, any adverse impact on the City's wastewater treatment facility, its sewer collection system, the receiving waters, or any other location below SO1.

## FACT SHEET

Rohm and Haas Electronic Materials, LLC located at 455 Forest Street in Marlborough is being issued a Marlborough Industrial Wastewater Discharge Permit, as your industry is considered a Significant Industrial User by the City of Marlborough.

Your discharge will be treated at the Marlborough Westerly Wastewater Treatment Plant on 303 Boundary Street in Marlborough, Massachusetts. The discharge from the Marlborough West Plant enters the Assabet River that then flows to the Sudbury River. The confluence of the Sudbury and Assabet Rivers form the Concord River that flows north to the Merrimac River then out to the Atlantic Ocean.

EFFECTIVE DATE: 2/10//2003 EXPIRATION DATE: 2/09/2008

Facility Name: Shipley Company, L.L.C.,

Advanced Technology Center (Fab 4)

**455 Forest Street** 

Marlborough, MA 01752



#### I. **DEFINITIONS**

Unless the context clearly indicates otherwise, the meaning of the terms or abbreviations used in this discharge permit shall be defined in exhibit " A ".

#### II. GENERAL CONDITIONS

- a. All discharges authorized herein shall be consistent with the terms of this permit. The discharge of any pollutant more frequently than or at a level in excess of that identified and authorized by this permit shall constitute a violation of the terms and conditions of this permit. Such a violation may result in the imposition of civil and / or criminal penalties as provided for in Marlborough's Sewer Use Ordinance and / or Public Law 92 500. Modifications, additions and / or expansions that increase or decrease the quality and / or quantity of wastewater discharged to the Wastewater Facilities must be reported to the City of Marlborough's Industrial Pretreatment Coordinator, in writing, and this permit may then be modified or reissued to reflect such changes. No change in the permittee's discharge may be made unless reported to, and approved by the City. In no case shall new connections, increased flows, or significant changes in effluent quantity and / or quality be permitted if such will cause violation of the effluent limitation specified herein, unless permitted by the City.
- b. After notice and opportunity for a hearing as provided in Section 15 9(d) of the Sewer "" " Use Ordinance, this permit may be modified, suspended, or revoked in whole or in part during its term, for causes including the following:
  - 1. Violation of any term or condition of this permit;
  - 2. Obtaining permit by misrepresentation or failure to disclose fully all-relevant facts.
  - 3. A change in conditions or the existence of a condition which requires either a temporary or permanent reduction or elimination of the authorized discharge.
  - 4. Promulgation of a more stringent pretreatment standard by State or Federal agencies having jurisdiction over receiving waters. Permits modified under this section may include implementation schedules, self monitoring requirements, revised effluent limitations, and other provisions necessary to assure compliance.
  - c. The permittee shall permit the City of Marlborough Department of Public Works and

other duly authorized Industrial Pretreatment personnel upon the presentation of proper credentials:

- 1. To enter upon permittee's premises where an effluent source is located or in which any records are required to be kept under the terms and conditions of this permit during business hours;
- 2. To have access to and copy any records required to be kept under the terms and conditions of this permit;
- 3. To inspect any monitoring equipment or monitoring method required in this permit, or
- 4. To sample at any intake, wastewater facility, or outfall.
- d. In the event that the permittee undergoes a major change in ownership of either its corporate voting stock or control of its corporate stock or of the building to which this contract relates, then and in any of said events, the permittee shall notify the City of Marlborough's Pretreatment Coordinator of such change. Failure to so notify the Pretreatment Coordinator within 30 days of such event shall void the permit at the option of the City of Marlborough. In the event of such transfer, the Transferee shall forthwith enter into a new permit with the City, which embodies the terms of this permit.
- e. If applicable, all pretreatment facilities shall be operated in a manner consistent with the Sewer Use Ordinance and any Federal. State, or local regulations and guidelines. The Permittee shall at all times maintain in good working order and operate as efficiently as possible any facilities or systems of controls installed or utilized to achieve compliance with the terms and conditions of this permit.
- f. The issuance of this permit does not convey any property rights in either its real or personal property, or any exclusive privileges; nor does it authorize or relieve the permittee of any liability for any injury to private property or any invasion of personal rights; nor any infringement of Federal, State, or local laws or regulations; nor does it waive the necessity of obtaining any State or Federal assent required by law for the discharge authorized herein;
- g. The provisions of this permit are severable and the invalidity of any condition or subdivision thereof shall not make void any other condition or subdivision thereof.
- h. <u>Non-Compliance:</u> In the event the permittee is unable to comply with any of the conditions of this permit due to a breakdown of pretreatment facilities, the permittee shall provide the City of Marlborough's Pretreatment Coordinator with the following information, in writing, within five (5) days after commencement of such occurrence;
  - 1. Cause of non-compliance;
  - 2. Anticipated time the condition of non-compliance is expected to continue, or if such conditions have been corrected, the duration of the period of non-compliance;
  - 3. Steps taken by the permittee to reduce and eliminate the non-complete discharge:

4. Steps to be taken by the permittee to prevent recurrence of the condition of non-compliance.

The City reserves all rights and remedies that it has under or by reason of any statutory law, ordinance, or common law to cure any breach of this agreement or to enforce any penalty for the breach thereof.

- i. <u>Emergency Action Electric Power Failure:</u> The permittee shall provide an alternative source of power for the operation of its pretreatment facilities or shut down its industrial operation of its pretreatment facilities or shut down its industrial operation during a power failure. The alternative power supply, whether from a generating unit located at the plant site or purchased from an independent source of electricity, must be separate from the existing power source used to operate the pretreatment facilities.
- j. <u>Bypasses, Slug Loads, Spills:</u> The slug loads, spills or bypass of any discharge from its pretreatment facilities utilized by the permittee to maintain compliance with the terms and conditions of this permit is prohibited, except where unavoidable to prevent loss of life. The permittee shall immediately notify the Pretreatment Coordinator, in writing, of each such slug, spill or bypass in accordance with the procedure specified above for reporting non compliance.
- k. **Revisions:** The City of Marlborough reserves the right to make appropriate revisions to this permit in order to establish any appropriate effluent limitations, schedule or compliance, or other provisions which may be authorized under Federal, State or City acts in order to bring all such discharges into compliance with these acts.
- 1 <u>Reapplication</u>: If the permittee desires to continue to discharge after the expiration of this permit, it shall reapply on the application forms then in use at least sixty (60) days before the Permit expires. Under no circumstances shall the permittee continue to discharge after the expiration of the Permit.

#### III. SPECIAL CONDITIONS

a. The permittee is required to connect their wastewater facilities to the public sewer in accordance with the provisions of the Sewer Use Ordinance, within ninety (90) days after the date of the official notice to do so, provided that said public sewer is determined to be accessible and available by the Department of Public Works.

14

- b. Upon connection to the City's wastewater facilities, the Permittee is authorized to discharge wastewater whose effluent characteristics shall not exceed the values listed in **Section VII., MONITORING REQUIREMENTS.**
- c. <u>Solids Disposal:</u> Collected screenings, sludges and other solids removed from liquid wastes shall not be allowed entry into the City's sewer collection system.

#### IV. COSTS AND CHARGES

a. <u>Summary of Costs and Charges:</u> In consideration of the wastewater disposal services provided by the City under the terms of this permit, the permittee shall pay a user charge at established rates.

- 1. <u>Connection Costs:</u> The entire cost of connecting the permittee's wastewater facilities to the City's system shall be paid by the Permittee or otherwise provided for to the satisfaction of the City.
- 2. <u>Late Charges:</u> All billings shall be subject to nine percent per annum late charge if not paid within thirty (30) days of the billing date.
- 3. <u>Payments:</u> All payments shall be made by check drawn payable to the order of the City of Marlborough and mailed to the DPW Municipal Garage, 135 Neil Street, Marlborough, Mass. 01752.

#### V. REPORTING AND MONITORING

- a. At each connection between the permittee's sewer system and the City's collection system the permittee shall install flow meters(s), composite sampler(s), sampling station, or other device(s) that shall measure sample and record the quantity / quality of wastewater flow from the industry. All monitoring devices and sampling stations must be approved by the City of Marlborough. The permittee shall maintain records of all information resulting from any monitoring activities required herein. The permittee shall accept the estimates of quantities of wastewater as established by the Industrial Pretreatment Coordinator during all periods in which the meters fail to measure the wastewater flow correctly.
- b. The Permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at regular intervals to ensure accuracy of measurements.
- c. The Permittee shall provide the above records and shall demonstrate the accuracy of the monitoring devices upon request of the City of Marlborough.
- d. The Permittee shall analyze any samples as may be required by the City of Marlborough to ensure effluent quality control.
- e. If the Permittee monitors any wastewater parameters more frequently than is required by this permit, the results of such monitoring shall also be made available upon request to the City of Marlborough's IPP coordinator.
- f. <u>Sampling and Analysis:</u> The sampling, preservation, handling, and analytical methods used must conform to the Approved Methods in <u>40 CFR 136.</u>
- g. All limitations as given in this permit are conditional, and may be revised, should the concentrations prove detrimental to the proper operation and maintenance of the Treatment Facilities. Upon notification to reduce the specified concentrations, the Permittee shall be responsible for all costs incurred at the Treatment Facilities, which resulted because of excessive concentrations.
- h. All industries are required to resample and analyze for any parameter that is in violation of their permit within 30 (thirty) days, and submit them to the IPP coordinator.

#### VI · IMPLEMENTATION SCHEDULE

No later than fourteen (14) calendar days following the date identified in the following schedule of compliance, the permittee shall submit either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or non - compliance. In the latter case, the notice shall include the cause of non - compliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

- 1. Ensure that a functional composite sampler is available for the collection of a representative effluent sample.
- 2. A pH meter with a continuous chart recorder shall be installed for monitoring regulated wastewater within thirty (30) days of the effective date of this permit and calibrated at least weekly.
- 3. Install a flow meter for continuous measurement of discharge volume within thirty (30) days of the effective date of this permit. This meter shall be calibrated at least annually.

#### b. Pretreatment

The permittee shall achieve compliance with the final effluent limitations as delineated below.

1. This facility is subject to the terms and conditions set forth in the City of Marlborough Sewer Use Ordinance and this permit.

#### VII. MONITORING REQUIREMENTS

Monitoring Facilities – Advanced Technology Center (Fab 4) building. Monitoring samples are to be taken after all industrial processes and pretreatment. Monitoring location shall be 'identified as NS02.

The Permittee shall collect and analyze representative samples for listed parameters not less frequently than the following schedule:

<u>Parameter</u>	<u>Units</u>	<b>Daily Maximum Limit</b>	Sample Type	Sample Freq
Ammonia, nitrogen	mg/l	NLS	C,	S
Antimony	mg/l	NLS	C	S
Arsenic	mg/l	0.42	C	S
$BOD_5$	mg/l	NLS	Ç ,	S
Beryllium	mg/l	0.12	C	S
COD	mg/l	NLS	Ç.	S
Cadmium	mg/l	0.02	C	S
Chromium	mg/l	0.77	C	S
Copper	mg/l	0.30	<u>C</u>	S
Cyanide	mg/l	0.23	G	S
Flow, Process	gpd	$_{3,000}$ C	ONTINUO	ONTINUOUS
		5		

Lead	mg/l	0.08	· C	S
Mercury	mg/l	0.0007	C	S
Nickel	mg/l	0.37	C	S
Oil and grease	mg/l	100	G	S
Phenol	mg/l	NLS	G	S
Selenium	mg/l	0.81	C	S
Silver	mg/l	0.01	C	S
EPA 624, 625*	mg/l	2.13	G/C	S
Thallium	mg/l	0.93	C	S
<b>Total Phosphorus</b>	mg/l	NLS	C	S
TSS	mg/l	NLS	C	$\mathbf{S}$
Zinc	mg/l	0.50	C	S
PH	$\widetilde{\mathrm{SU}}$	6.0 - 9.0	CONTINUOUS	CONTINUOUS

^{*} EPA 624 is to be done on a grab sample; EPA 625 is done on a composite sample.

- A. All Weekly reports are due no later than three (3) weeks from the sampling date.
- **B.** All **Monthly reports** are due by the 15th day of the following month.
- C. All **Quarterly reports** are due no later than the 15th day of April, July, October and January.*
- **D.** All <u>Semi-annual reports</u> are due in June and December.
- E. All Annual reports are to be received no later than December 31st.

#### Municipal Limitations / Conditions / General comments

- 1. Adhere to the City of Marlborough's Sewer Use Ordinance.
- 2. Ensure that a functional composite sampler is available for the collection of a representative effluent sample.
- 3. Ensure that the pH meter with a continuous chart recorder is calibrated at least biweekly.
- 4. Ensure that the flow meter for continuous measurement of discharge volume is calibrated at least annually.
- 5. The wastewater discharge shall not contain a visible oil sheen or foam at any time
- **6.** The discharge shall not contain objectionable discoloration.

^{*}Example: If there is a requirement for quarterly phosphorus sampling, a sample has to be taken in January, February or March and the results are to be received by the IPP coordinator by April 15th. This scenario is the same for all calendar quarters.

Permit #: NSIU4817950-1

Effective date: 2/10/2003 Expiration date: 2/09/2008

### This page is considered part of the discharge permit.

CITY OF MARLBOROUGH AUTHORIZATION TO DISCHARGE TO THE EASTERLY / <u>WESTERLY</u> WASTEWATER TREATMENT FACILITY

Company Name: Shipley Company, L.L.C.

Address: 455 Forest Street

Marlborough, MA 01752

Telephone Number: 508-481-7950

The Shipley Company is authorized by the Department of Public Works to discharge wastewater from the Advanced Technology Center (Fab 4) located at 455 Forest Street, Marlborough, Massachusetts to the Marlborough Westerly WWTP in accordance with the following conditions.

## Adhere to all of the conditions in your Industrial Wastewater Discharge Permit # NSIU4817950-1

This permit consists of /2 pages including effluent limitations, monitoring requirements and general conditions etc.

Signed this 5 day of February, 2003

Roland Gould IPP Coordinator

Marlborough DPW

#### **CITY OF MARLBOROUGH** ACKNOWLEDGEMENT OF PERMIT LIMITATIONS

The undersigned acknowledges the receipt of the permit authorizing discharge of wastewater to the Marlborough Sewer System being permit # NSIU4817950-1. The permittee also acknowledges that this permit is issued at its request based upon the application for the permit and the information provided and acknowledges the conditions and limitations set forth in said permit. All information and data contained in this document pursuant to the General Pretreatment Requirements Part 403.14 identifying the nature and frequency of a discharge shall be available to the public without restriction.

City of Marlborough

Shipley Company, L.L.C.

(permitting authority)

(permittee)

Date: 5th Felo 03

## **FACT SHEET**

Shipley Company L.L.C. located at 455 Forest Street in Marlborough is being issued this Marlborough Industrial Wastewater Discharge Permit for the Advanced Technology Center,

designated as "Fab 4".

Your discharge will be treated at the Marlborough Westerly Wastewater Treatment Plant on 303
Boundary Street in Marlborough, Massachusetts. The discharge from the Marlborough West Plant enters the Assabet River that then flows to the Sudbury River. The confluence of the Sudbury and Assabet Rivers form the Concord River that flows north to the Merrimac River then out to the Atlantic Ocean.

#### EXHIBIT "A"

#### DEFINITIONS

1. BOD, denotes BIOCHEMICAL OXYGEN DEMAND, which means the quantity of oxygen utilized in the biochemical exidation of organic matter under standard laboratory procedures in five (5) days at twenty (20) degrees Centigrade expressed in parts per million by weight, as determined by Standard Methods.

2. CITY shall mean the City of MARLBOROUGH, MASS.

- 4. FLOW RECORDER shall mean a weir, meter or flume or other device, which will measure and record the volume of wastewater discharged.
  - 5. MGD Wastewater flow in million gallons per day.
- 6. MAXIMUM DAILY FLOW shall mean the highest daily rate of wastewater flow occurring within a single day.
- 7. MEASURING DEVICE Instrument determining concentration, flow, etc.
- 8. METER An instrument for measuring the amount and rate of flow of liquids.
- 9. MINIMUM DAILY FLOW shall mean the smallest rate of . We wastewater flow of liquids.

^{3.} DISCHARGE MEASUREMENT - The determination of the quantity of wastewater flowing per unit of time in the sewer system at a given point by means of a current meter, rod float, weir, Pitot tube, or other measuring device or method.

- 10. MONITORING DEVICE shall mean any equipment which specifically measures and/or samples wastewater.
- 11. PRETREATMENT FACILITIES shall mean the structures, equipment, and processes required to collect, treat, and transport.
- 12. QUANTITY AND QUALITY OF WASTEWATER is an expression which determines the amount and composition of the wastewater. Composition, in this case, refers to the chemical and physical characteristics of the solid and liquid constituents of the wastewater. These characteristics are usually measured in terms of gallons per day, BOD and SS.
- 13. SAMPLE shall mean a portion of the wastewater obtained for analytical purposes. This portion may be a single sample (grab), composite sample, continuous sample or periodic sample.

:

- a. SAMPLER A device used with or without flow measurement to obtain in aliquot portion of water or wastewater for analytical purposes. May be designed for taking single sample (grab), composite sample, continuous sample, periodic sample.
- b. COMPOSITE WASTEWATER SAMPLE A combination of individual samples of water or wastewater taken at selected intervals, generally hourly for some specified period, to minimize the effect of the variability of the individual sample. Individual

samples shall be proportioned to the flow at time of sampling.

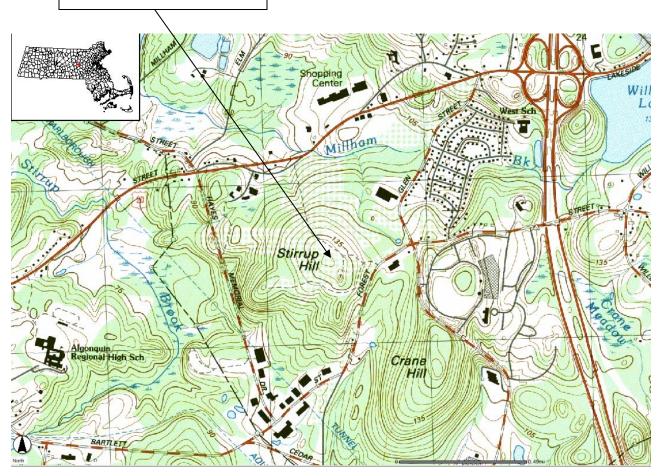
- c. SAMPLING STATION A specified site where monitoring takes place on a regular basis.
- 14. SHALL is mandatory; MAY is permissive.
- 15. SUSPENDED SOLIDS shall mean the solids that either float on the surface of, or are in suspension in wastewater and which are largely removable by laboratory filtering, and wastewater treatment plant.
- 16. WASTEWATER TREATMENT FACILITIES The structures, equipment, and processes required to collect, transport, treat and dispose of wastewater and dispose of the effluent including but not limited to collection system, interceptors, and wastewater treatment plant.
- 17. TREATMENT (TREAT) shall mean a process to which wastewater is subjected in order to remove or alter its objectional constituents and thus render it less offensive or dangerous.
- 18. WASTEWATER The spent water of an industry. Spent water may be a combination of the liquid wastes from industrial establishments, together with any groundwater, surfacewater and storm water that may be present.
- 19. WASTEWATER DISPOSAL The act of disposing of wastewater by discharging to the City's Wastewater Treatment Facilities.

#### Attachment C

Site Map and DEP Priority Resource Map

- Main Pretreatment Facility
- ATC Pretreatment System

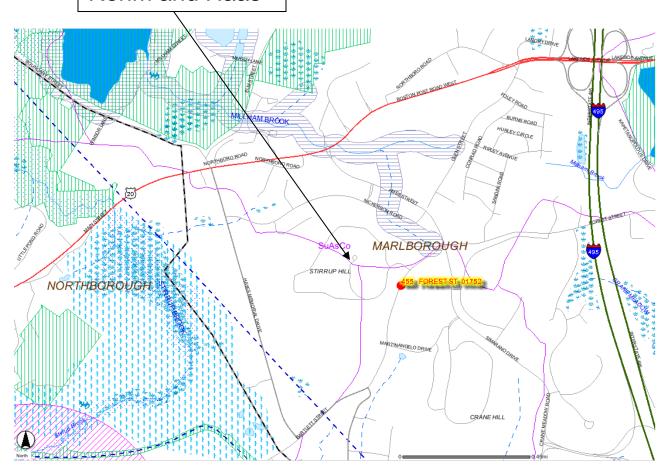






USGS 25k Topographic Maps

## Rohm and Haas





#### DEP MCP 21e Map Legend



#### Flood Insights test results for:

Latitude: 42.325192 Longitude: -71.597773

Geocoding Accuracy: Not Available

### **Flood Zone Determinations**

**Test Description** 

SFHA (Flood Zone) Within 250 feet of multiple flood zones?

Out No

Community Community Name Zone Panel Panel Date

250203 MARLBOROUGH, CITY OF C 0025B January 06, 1982

FIPS Code Census Tract

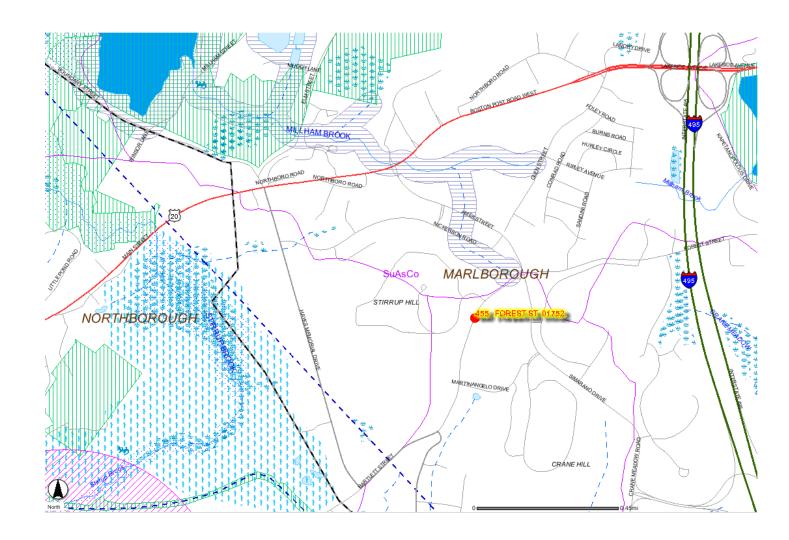
25017 3214.00

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This report was generated by: ebi on 08-03-2004

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#### Attachment D

## **Engineering Plans**

- Main Pretreatment Facility
- ATC Pretreatment System



21 B Street Burlington, MA 01803 Tel: (781) 273-2500 Fax: (781) 273.3311

January 4, 2008

Sarita Croce Environmental Engineering Manager Rohm and Haas Electronic Materials 455 Forest Street Marlborough, MA 01742

Subject: Review and Certification of IWPS Drawings by MA-Licensed PE

Dear Sarita:

In response to your request to do so, Envirobusiness, Inc. (EBI) has completed a review of the two (2) industrial wastewater pretreatment systems (IWPS) currently operating at the Rohm and Haas Electronic Materials (RHEM) manufacturing and research campus located at 455 Forest Street in Marlborough, MA. This review was completed as part of RHEM's submittal to MA Department of Environmental Protection (MA DEP) under permit category BWP IW 38, in accordance with 314 CMR 7.00. Enclosed, please find a written Certification Statement, signed and sealed by a Professional Engineer licensed to practice in Massachusetts. In addition, four sets of PEsealed drawings entitled "Industrial Wastewater Pretreatment Systems", dated 1-04-08, are enclosed.

The engineering review was completed by Mr. Christopher A. Walton, PE (MA license #39510). Mr. Walton is a Senior Engineer at EBI, with more than 17 years of experience with industrial wastewater pretreatment system design, permitting, construction, and operation. He is also a Grade 6C licensed wastewater treatment plant operator (MA license #8089).

#### Scope of Review

This engineering review is limited to the piping, equipment, and controls that comprise the facility's special waste collection and treatment systems (a.k.a Industrial Wastewater Pretreatment System, or IWPS), up to and including the facility's sewer connection in Forest Street. The scope of the review extends only to the piping and equipment as shown on the attached engineering drawings, dated I-04-08. Process piping and operations "upstream" of the waste transfer stations in the Main Building are not included in this review. This review is also limited to an analysis of the facility's compliance with the design and construction standards set forth in 314 CMR 7.05(2)(g)3. Any certification made herein does not imply compliance with any other regulation or statute, nor does it relieve Rohm and Haas of its obligation to comply with applicable regulations.

Please feel free to contact me at any time regarding this certification and/or the attached drawings.

Very truly yours, **EBI Consulting, by:** 

Christopher A. Walton, PE Senior Engineer

Cc: Paul Richard, EBI

Enc

#### P.E. Certification

Rohm and Haas Electronic Materials 455 Forest Street Marlborough, MA 01742

#### Industrial Wastewater Pretreatment Systems - As-Built Process Flow Diagram and Layout

I, being familiar with the provisions of 314 CMR 7.00 (MA DEP Sewer System Extension and Connection Permit Program), regarding engineering design and construction standards for sewer connections and industrial wastewater pretreatment systems, have reviewed the industrial wastewater pretreatment systems in operation at Rohm and Haas Electronic Materials, located at 455 Forest Street in Marlborough, MA and believe that they have been designed and built in accordance with 314 CMR 7.05(2)(g)3.

This certification is valid for two (2) industrial wastewater pretreatment systems (Main Building and Advanced Technology Center (ATC) Building) as depicted in the as-built drawing set dated January 4, 2008, titled "Industrial Wastewater Pretreatment Systems", and inclusive of process flow diagrams and layouts for both industrial wastewater pretreatment systems in place at Rohm and Haas.

This certification is no longer valid when any planned or unplanned modification takes place that can change the quantity or quality of wastewater discharges from the facility. It is understood that Rohm and Haas Electronic Materials also certifies that the information provided is true and accurate.

This certification does not relieve Rohm and Haas Electronic Materials of its duty to operate its industrial wastewater pretreatment systems and sewer connections in accordance with 314 CMR 7.00.

Name:	Christopher A. Walton
Date:	1-04-08
License Number:	39510
State Issuing License:	МА

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#### Attachment E

## Description of Industrial Wastewater Pretreatment Systems

- Main Pretreatment Facility
- ATC Pretreatment System

#### PROCESS DESCRIPTION

#### Main Pretreatment Facility Process Description

The industrial wastewater treated in the Main Pretreatment Facility consists of several individual waste streams that receive segregated pretreatment, which is generally followed by flow equalization and dual stage pH neutralization. RHEM waste streams are segregated and collected in line storage tanks prior to treatment.

• Dilute Process Rinse Waters (2nd Metal Bearing Rinses and Equipment Wash Down)

Process second rinse water is collected in the 8,000 gallon main process tank. The effluent is pumped to one of three batch treatment tanks for metals removal.

The pH of the rinse water is raised to the appropriate pH for optimal removal efficiency with the addition of lime. A Barclay polymer-based flocculant is then added and mixed for a minimum of 15 minutes. In addition, polymer and coagulants are added as needed to enhance solids separation. When mixing is complete, the treated wastewater is allowed to settle for I-4 hours. The supernatant is usually decanted to Neutralization Tank # I; however the Post Tank may also be used for flow equalization and pH adjustment prior to discharge. Settled solids are pumped to the sludge thickening tank for further settling. The supernatant from the sludge thickening tank is eventually returned to the batch treatment tank process. Normally, the supernatant is pumped to the Post Tank, and sometimes to Neutralization Tank #I. The sludge is pumped to a dedicated filter press for solids dewatering. The dewatered sludge filter cake is shipped off-site for proper disposal as a non-regulated waste.

• Metal Concentrates (Copper and Nickel 1st Rinses)

Metal concentrates are segregated into separate holding tanks. The copper and nickel rinses are pumped to a holding tank prior to processing in the Calfran cold evaporation unit. The residual concentrate is collected and shipped off-site for disposal as hazardous waste. Effluent from the evaporation unit is directed to RHEM's main process tank for further treatment. The final step is flow equalization and pH adjustment prior to discharge.

• Cyanide (1st Rinses)

Cyanide rinses are collected in 55 gallon drums and shipped off-site for disposal.

NOTE: production of cyanide bearing chemicals has decreased significantly in recent years, and accompanying rinse wastes have been reduced to almost zero.

Acid, Alkaline, Ammonia and Hypophosphate Rinses (non-metal bearing waste streams)

Confirmation metals testing are performed prior to discharging these rinses. These rinses are pumped to the post treatment tank for pH adjustment prior to discharge.

#### • Tin (1st Rinses)

Tin rinses are collected in a 500 gallon storage tank. The contents are treated for metals removal (see *Process Rinse Waters* above), and are then directed to the post treatment tank for flow equalization and pH adjustment prior to discharge.

#### • Catalyst Reclaim (Palladium Rinse)

Palladium is collected in drums and then pumped into a 200 gallon treatment tank, where the pH is then adjusted to 11 with the addition of sodium hydroxide. After settling for 4 hours, the decant is pumped to the main process tank for additional metals removal (see *Process Rinse Waters* above), and are then directed to the post treatment for flow equalization and pH adjustment prior to discharge. The settled palladium sludge is shipped off-site for reclaim.

#### • Scrubber Wastewater

The effluent from the R&D ion exchange system (see below) provides feed water to the scrubber system, which consists of three wet air scrubbers that treat fumes from various locations throughout the RHEM plant. City water is added to the scrubber system feed tank automatically when the volume of R&D system effluent is not sufficient for system operation. Scrubber system wastewater is discharged to the First Stage Neutralization Tank where wastewater is automatically neutralized by the addition of sodium hydroxide or hydrochloric acid, as needed.

#### R&D Ion Exchange System

Wastewater from various laboratory operations is pumped to a primary tank for pH adjustment, from which it overflows to a secondary tank for further pH adjustment. The wastewater is then pumped through dual cartridge filters before being pumped through one of two ion exchange units. The ion exchange effluent is pumped into a holding tank for final pH adjustment prior to discharge to the scrubber feed tank (see *Scrubber Wastewater* above).

#### ATC Pretreatment System Process Description

Rohm and Haas Electronic Materials, LLC (RHEM) Advanced Technology Center (ATC), also known as Fab 4, is located at 455 Forest Street in Marlborough, Massachusetts, a part of the larger RHEM complex. Operations at this facility are described by SIC Code 2899 (Chemicals and Chemical Preparations, Not Elsewhere Classified). The ATC facility is a state of the art photolithography processing facility, capable of housing and operating the most sensitive lithography tools available. The facility operates pilot size clean rooms to process semiconductor wafers and plating lines to process printed wire boards as well as a number of quality control and analytical laboratories. The process consists of photoresist developing in which an alkaline developer solution (~2% TMAH in de-ionized water) is applied to UV-exposed, resist-coated semiconductor wafers, followed by a de-ionized water rinse. Although the facility utilizes production scale tools, its main activities include research and development (R&D) and the quality control of RHEM's products. Hence, there are no products produced and no production at the site. Additionally, the chemical and semiconductor wafer throughput, along with other material usage, will be very low in comparison to a standard manufacturing facility.

Rinsewater from the developer process is piped to a 200-gallon storage tank. Once the volume in the tank reaches approximately 20% of its total capacity, the pH of the rinsewater is manually adjusted (usually lowered) to pH 7. The rinsewater is then transferred via a sump pump to a carbon filter and then two ion exchange cartridges connected in series. After ion exchange treatment, the wastewater is transferred to a pH adjustment tank for active neutralization with sodium hydroxide and sulfuric acid. The reverse osmosis (RO) reject water is transferred directly to the neutralization tank. The treated wastewater from the neutralization tank flows into a final equalization tank where the effluent pH and flow is recorded, before it is continuously discharged to the Marlborough Westerly Waste Treatment Works (MWWTW).

In April of 2008, RHEM will add an additional process to the existing ATC facility to be known as "Fab 5". Fab 5 operations are very similar to all the existing ATC operations. The addition of Fab 5 will increase the capacity of this facility. Wastewater from this building will be treated by the same industrial wastewater pretreatment system as the ATC building. Currently, there are no plans to add new chemicals for the processes in Fab 5. RHEM estimates that the total process flow discharged, including the new Fab 5, through this system will average approximately 2,500 gallons per day with a maximum of 3,000 gallons per day.